OL. 69 NO. 5

textile bulletin

NOVEMBER • 1 • 1945

The development and uses of watertight cotton fabrics are discussed by Dr. Frederick T. Peirce in an article published on Pages 11 and 12 of this issue.

VICTORY LOAN

ABP

ABC

DVERTISING
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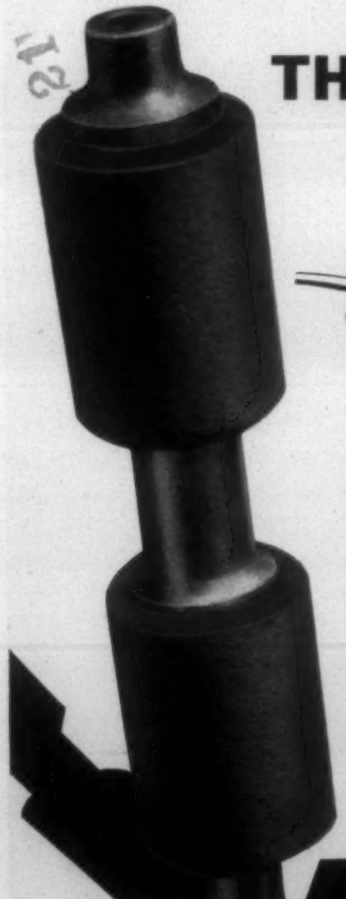

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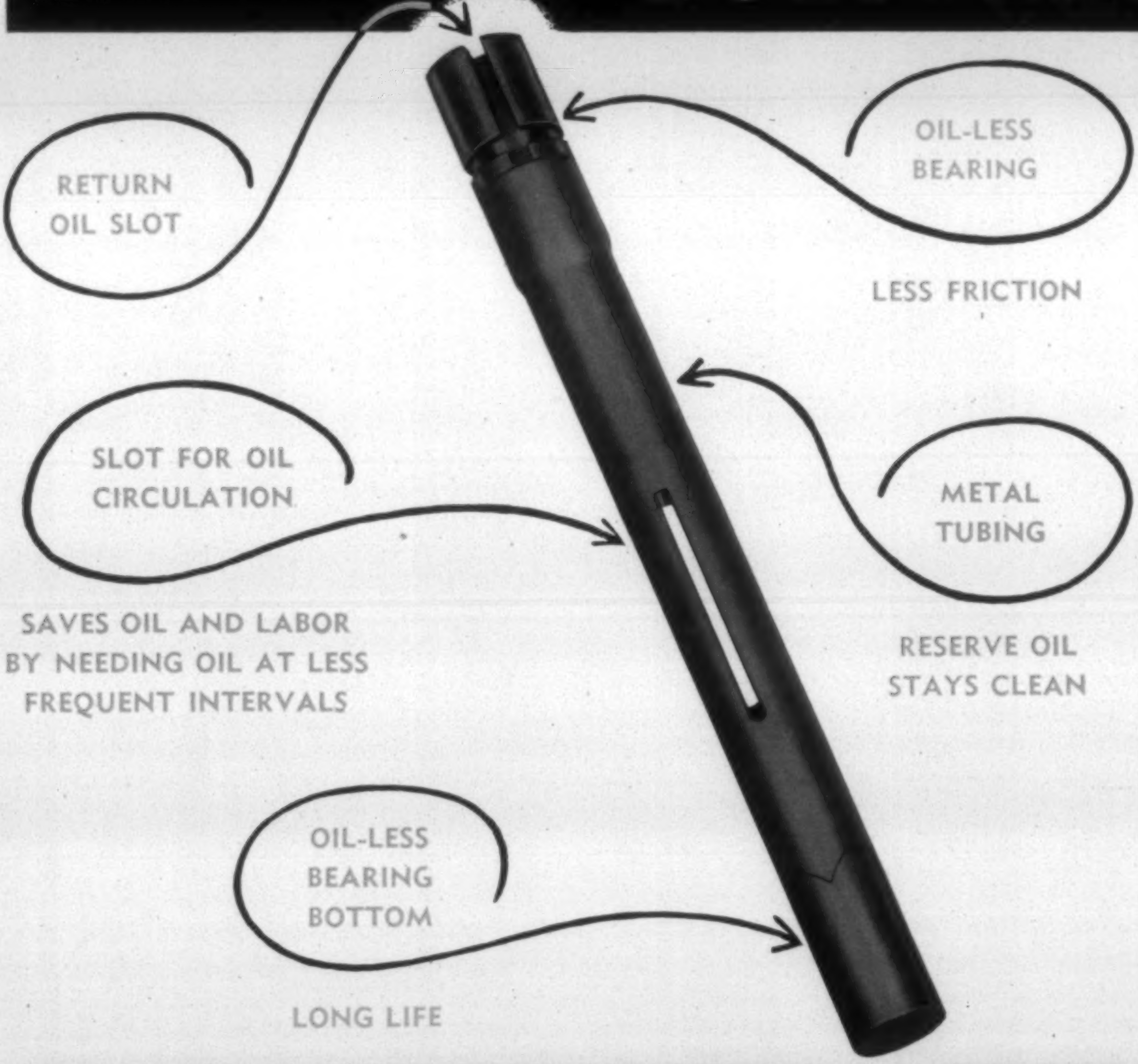

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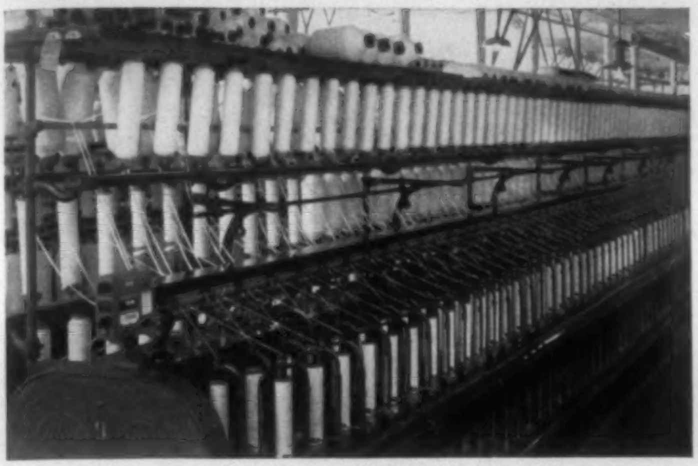

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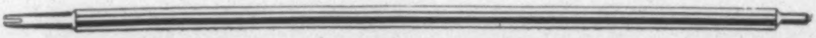

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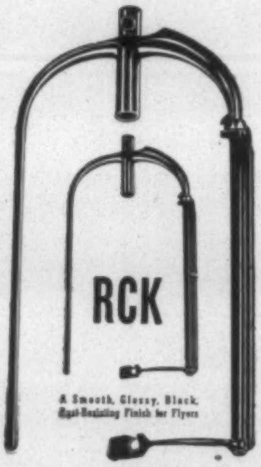
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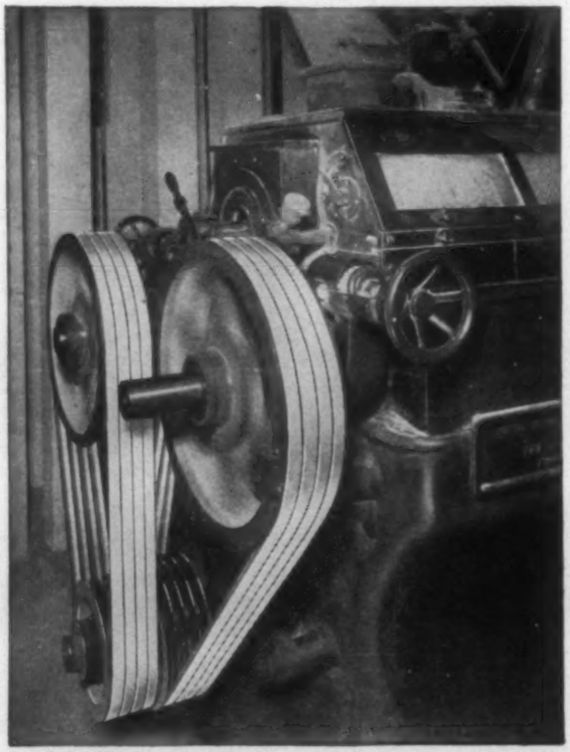

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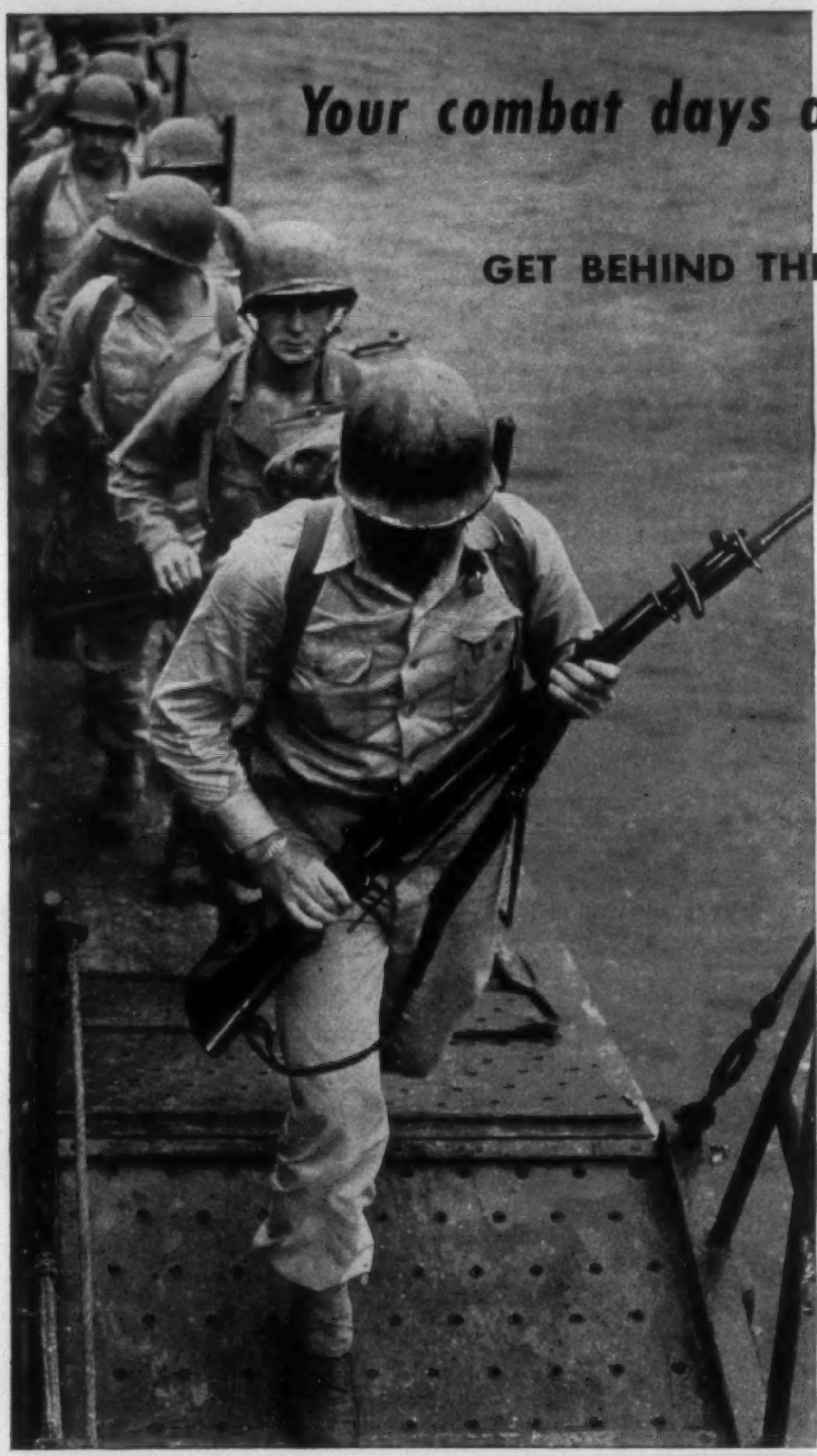

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There's plenty of action ahead for fast-thinking industrial leaders in putting over the new Victory Loan! Your Victory drive is important because:

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textile bulletin

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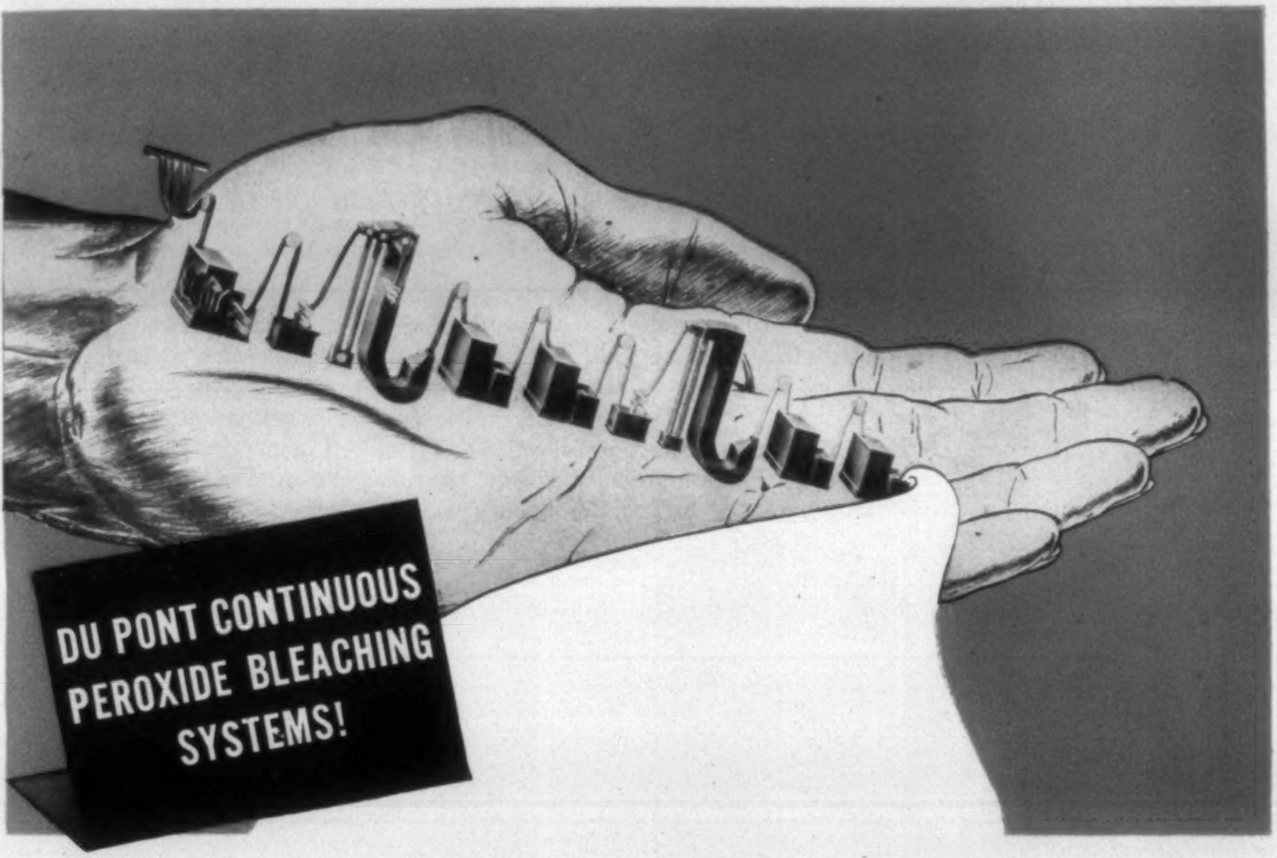
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GUEST EDITORIALS

The Problems of Peace

NOW that the active fighting is over, there come the grave problems of peace, the reconversion of our business so that we can make the goods needed for our fellow citizens, and extend such help as we can give to those in other lands who have suffered worse than we have suffered. Most important of all, all of us must adjust ourselves to new conditions and find our places in a new world.

The problems of peace are just as grave as were the problems of war, and it will be a tragedy if we won the war and failed to win the peace.

I am certain that real peace will never come to the world until the Prince of Peace has been enthroned in the hearts of men and women everywhere, and all of us can make our best contribution to peace by spreading the Gospel of Him who came to bring peace and comfort to all men. This Gospel is a message of love, good will, mutual confidence and esteem, and a burning desire to do the right thing under all conditions. He taught that men and women could not live to themselves and for themselves, but that we must have sympathy for each other and be moved by the spirit of love.

The practical application of all of this must be a realization of individual responsibility. We, ourselves, are our greatest charges and if every one of us determines to do the right thing, the fair thing and the Godly thing, then the result will be good for all. There is no such thing as mass salvation. It is a personal thing. There is no such thing as mass duty; it is individual.

None of us can run away or dodge our personal responsibility in this situation, and if we try any such course, it will lead to unhappiness and discord. No greater comfort can come to anyone than is to be found in a realization that we have done the best job we can.

I have a deep sympathy for all who have suffered in this war. There are many of us who will long for the touch of a vanished hand and for the sound of a voice that has been stilled. In such cases, the only relief that can come to aching hearts and the only joy we will find in life will be in attempting to lighten the load of others who are in trouble and distress, and in doing our full part in making this a better world and a happier place in which to work out our destiny.—Wm. D. Anderson in *The Bibb Recorder*.

The Demand for Quality

NOW that this nation is fairly rapidly converting to peacetime conditions, industry must face peacetime requirements of those who purchase its products.

Due to war conditions the general public has been more concerned with being able to procure items that were needed and has not been very critical over the quality of the products available for sale. That condition is rapidly changing, and from now on the quality of merchandise will be extremely important. Manufacturers, therefore, are going to have to given even more concern to the quality of their products than before the war. This is due to the fact that industry as a whole has learned much by developments during the war period, and progressive manufacturers are going to try to take full advantage of those developments in both improving quality and in putting out products at the lowest posible cost.

Manufacturers who successfully measure up to the requirements of the future will have to avail themselves of new types of supplies and raw products, and also of a better quality of workmanship within their plants.

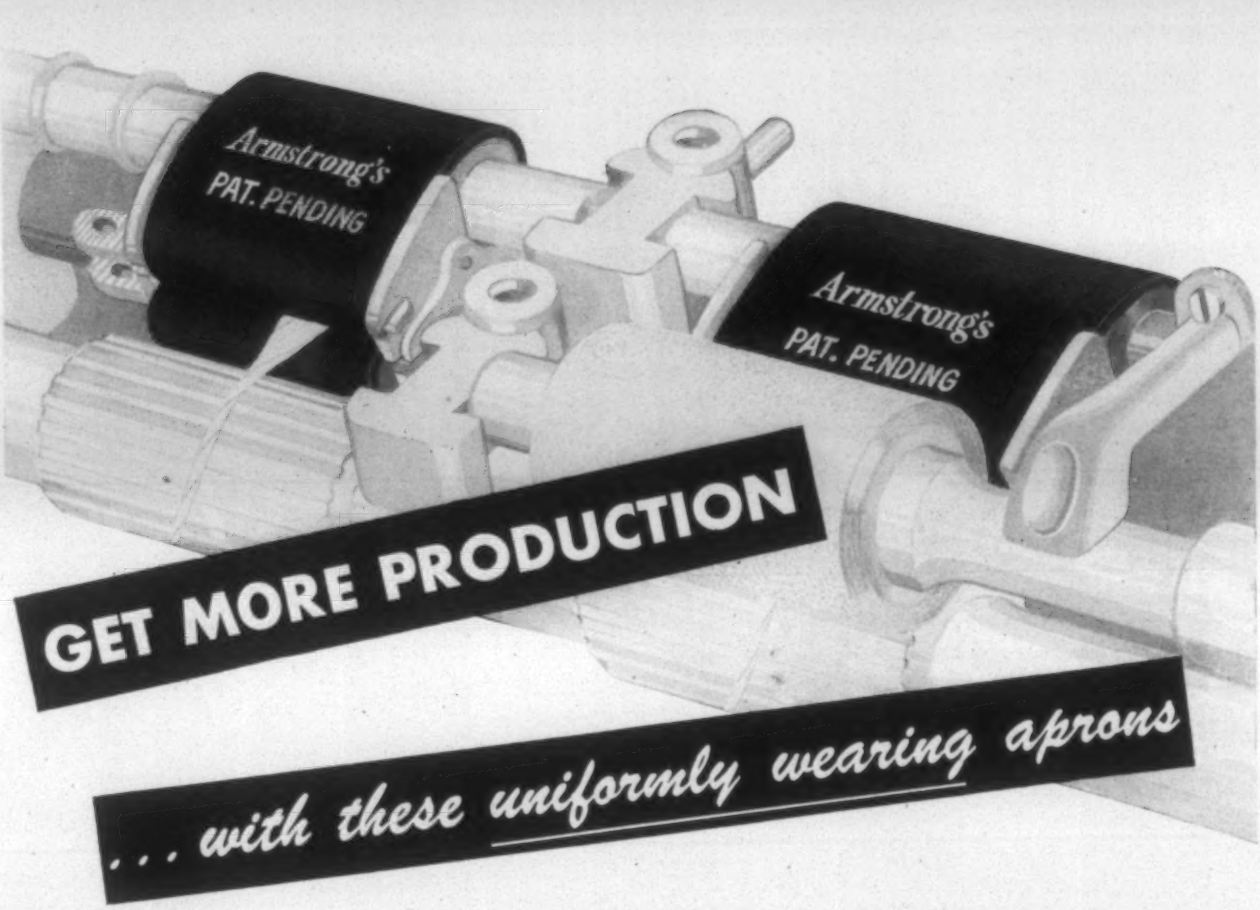
Rule of thumb methods will be replaced by methods developed through scientific study.

The consumer public, of which you and I are a part, will not accept excuses for the products we desire on the grounds that the firm producing them has been making them that way for 40 years or more, but will be interested in the quality of the product and whether or not it serves his purpose most satisfactorily regardless of where it was made. We as consumers will give our consideration to that quality as compared with the quality of other products.

The manufacturer who fails to realize that fact is not going to fare so well in the future, and if the manufacturer doesn't fare so well, those who work with him will not fare so well.

Progressive manufacturers all over the nation are fully conscious of the competitive race for better quality products at the lowest possible prices. They are, therefore, doing much research work, procuring new equipment, and modifying their own methods so as to be able to compete.

We all, as a team, have our responsibilities in the program ahead. We must keep it firmly in our minds that the real boss of industry is the buying public, of which we each are a part. We, therefore, must produce the type of merchandise at a cost which will permit it to be sold so that we ourselves, together with millions of others, will be willing to readily purchase it after comparing it with the products offered by others.—*The Textorian.*



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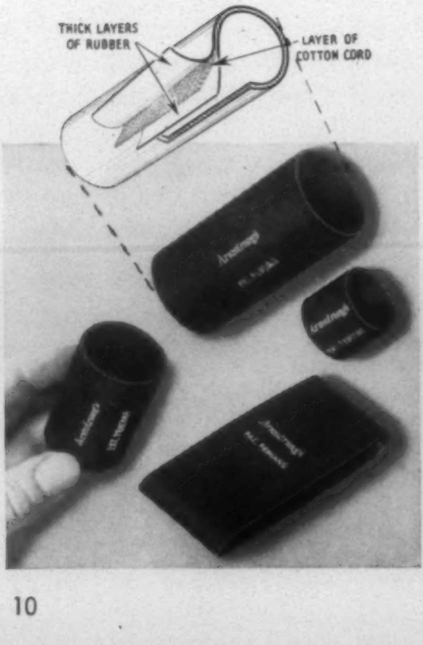


ARMSTRONG'S ACCOTEX APRONS

CORK COTS • ACCOTEX COTS

textile bulletin

Vol. 69 November 1, 1945 No. 5

Watertight Cotton Fabrics

By DR. FREDERICK T. PEIRCE, Director of Research
School of Textiles, North Carolina State College

IN the tombs of the Pharoahs, fabrics of flax were found of plain weave with two warp threads running as one. Waterholding canvas is hardly as old, but close flax canvas of this construction has long been used for tentage, water tanks and bottles, fire-fighting hose, etc. As a veteran of the Australian Light Horse and of bush camping, I had long been familiar with such materials and their characteristics, particularly the interesting and useful feature of "making-up", the gradual cessation of water penetration as the material wets out.

They always had to be of flax—cotton made a poor substitute. Why? That was the question when the threat of war indicated demands exceeding the supply of flax. Studies of the fibers indicated that the swelling of flax which sealed the fabric interstices was little more than that of the cotton fiber. The answer seemed to be that the single yarns of the cotton substitutes were hard-twisted. Being coarse, they could be spun from cheap, short, coarse cottons but such cottons demand a hard twist for warp yarn. The helical structure turned the swelling pressure into a constrictive tension on the fibers, which made the yarns assume a rounded form and opened up the interstices, whereas the almost untwisted flax threads freely swelled into the free spaces to seal them. By making cotton fabric similar in structure to the traditional and well-tried flax canvas, but with long, fine fibers softly twisted, cotton proved superior to flax, as the same self-sealing action was obtained but with much more regular yarns and therefore smaller interstices to seal.

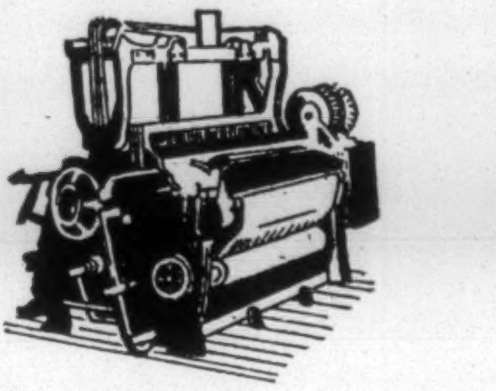
Other Necessities in Construction

For the sterner demands, other advantages of flax had to be realized with cotton—low extensibility to resist opening up under tension and high density to increase the swelling pressure. Wet doubling and mercerizing under high tension were effective in giving to cotton yarns these qualities of flax. Fire hose thus made easily passed the stringent official tests for leakage and strength. For many purposes, such as forest fighting, where some leakage is allowable or desirable, the texture need not be as close as the limit imposed by weaving. A little leakage seems indeed to increase the flow by suppressing turbulence, on the principle of the DeHavilland slit in airplane wings.

A New Range of Fabrics

Having attained these results with cotton in heavy fabrics normally made of flax, a wide range of new fabrics was opened up. Flax makes such irregular yarn that self-sealing fabrics can only be made of coarse plied yarns. Irregularity increases roughly as the third power of the fineness and fine flax yarns are so irregular in thickness that they give a handicraft appeal to table linen dresses. Fine cottons however make fine yarns as regular as the coarse yarns of flax canvas, and in similar constructions they can give the same self-sealing character to garment materials. Here was an opportunity indeed. Since men had clothed themselves, they had suffered discomfort or worse from the wetting of their garments by rain or sweat. The problem became really serious in war, when men could not cease work for rain but had to fight at the highest pitch of bodily efficiency under any conditions that might prevail and for long periods of exposure. A painted or coated fabric, oilskin or rubber mackintosh, held the perspiration and often produced conditions that went beyond discomfort to fatigue and collapse. The coating added weight without strength and had much less resistance to weather and wear than fiber. Water repellence, imparted by a waxy finish to either a close or a hairy fabric, threw off showers but no such treatments resist long contact with water or rubbing against wet surface. The surface soon becomes fouled in wear and readily wettable so that frequent retreatment is necessary even for shower proofing.

The only thing that did the trick satisfactorily was a close-textured waterproofed leather, such as chromed capeskin. Even this had to be taken with the limitations of its nature, very heavy for garments and rather sweaty and hot because of its thickness, obtainable only in small pieces with frequent, incalculable flaws, expensive and in small supply. Still, the tried and familiar practical utility of waterproof leather coats shows what can be done in the way of keeping water out without keeping sweat in. The water holding canvas texture made in fine cotton yarns and waterproofed, preferably by a softening, semi-permanent treatment such as Zelan, does just that.



All the elements for such a material were present in the good cotton gabardines of commerce, such as Byrd cloth, but the performance in use was sacrificed to ease of manufacture, by the use of a twill weave. In this, the warp and filling are merely laid across each other half the time, with slack interstices incapable of resisting water pressure or sealing by fiber swelling. Certainly, it makes a nice looking cloth with pleasant handle and drape, easy to weave and make up. Is that worth getting wet for? Tests showed that fabric made from the gabardine yarns with the same number of threads gave in canvas weave twice the resistance to water pressure than in twill weave, retained when wet some 20 per cent less water on the cloth weight and then cut down the flow of water by a factor of some thousands. Tests also show that the close, self-sealing weave, though it increases resistance to wind penetration several times, does not diminish the outward flow of perspiration one whit. The latter is due to moisture diffusion, which increases with thickness, but is very insensitive to the size of interstices between water-absorbing fibers. But the real test is to experience the comfort and protection afforded by the garments in wear. Then the invariable question is not "What are the test results?" but "Where can I get this?" and "How much does it cost?"

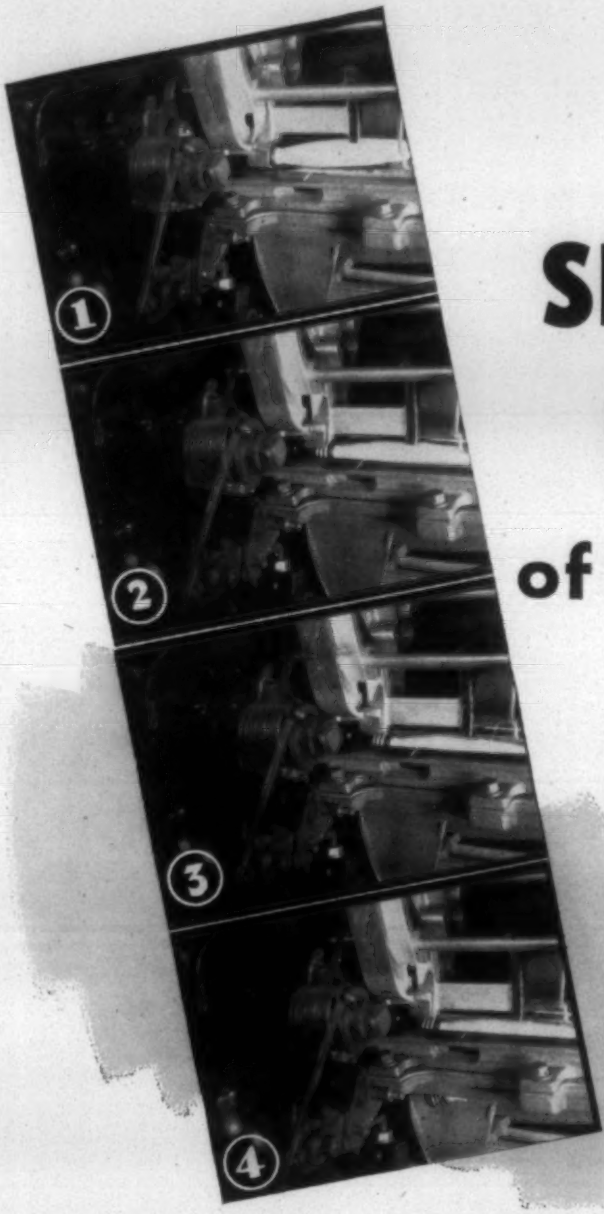
The cost need be very little more than that of gabardine as the same materials and processes are used. For the best results, the cotton may be a little better, the yarn spun more uniformly, the loom should be rather more rugged. Honest and intelligent control of production is the essential rather than any increase in cost of materials, labor or plant. Where this can be got, watertight garments of the highest performance can be made. Any nibbling at the quality required for given purpose will degrade the performance out of all proportion to the savings in cost. A British association has been formed to insure that the manufacturers are well instructed and maintain effective control of production and that the consumers are protected by a tested, branded quality.

The performance necessary to satisfactory service varies over a wide range with the purpose of the garment. Perhaps the most stringent is the ditching suit, in which a fighter pilot drops into the sea on the hope of getting picked up, perhaps in an hour or so, yet has to wear ready for action throughout hours of his duty. The closest texture of best quality mercerized yarns is none too imperable for such a purpose. This quality is too expensive and in too short supply for infantry G. I. or farm laborers, who may have to be content with the best that can be made of single yarn. It is too heavy for ladies' capes, for whom a beautiful material of some 4¼ ounces per square yard can be provided, still of remarkably high performance: or good practical service for town wear can be provided in a handkerchief weight of 3¼ ounces per square yard. This will make a pocket cape or a serviceable light tent. Similar light materials provide cool tropical clothing resistant to mosquitos, for the resistance to heat and moisture diffusion depend primarily on thickness.

At the beginning of exposure to rain, these materials behave like the familiar shower-proof gabardine, becoming wetted neither slower nor quicker, on the surace, and quicker than a water-repellent tweed. It is in prolonged or heavy exposure and in continuous service that the second line of defense comes into action, cutting down the penetration of water to very small proportions. The high performance realized seems to go beyond what might be expected of sealing by swelling alone, owing a lot to the persistent hydrophobic surface of the very fine interstices. Better, more permanent and more penetrating water repellents will improve the materials.

Use of Size and Fillers

Work has been proceeding both in America and in England on the use of water absorbing but insoluble size and fillers to assist the fibers in sealing interstices, either to make up for the deficiencies of cotton yarns of lower quality or to attain extremely high impermeability, as for a ditching suit. Such added materials have not the wear resistance of fiber and make a very stiff fabric, but they should have their place among the many functions of vapor permeable, watertight fabrics. These are not limited to bodily hygiene. A cover or container may maintain drier conditions under many circumstances if it allows moisture to diffuse out. The resistance to flow is not absolute and it can be made more or less effective by the design and construction of garments and equipment, by seaming, lining, judicious reinforcement and pattern design. The latter needs study to form the viewpoint of "cloth engineering" as these materials have not the soft sleeziness of most garment fabrics, which gives much latitude in cutting patterns to fit a figure.



See the SPLIT-SECOND PRECISION of Bobbin-Transfer on a modern C&K LOOM

These four flash-pictures show part of the process of ejecting an empty bobbin from the shuttle, and substituting a full one.

Actually, this operation is completed so swiftly that it's invisible to any eye—except one like that of the C&K high-speed camera.

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And this operation must be completed in less than 1/20th of a second, while the shuttle is under the magazine!

Then the new, full bobbin starts on its flight back and forth through the shed.

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And these time-limits are being constantly studied by the engineers of Crompton and Knowles Loom Works to the end that *your* weavers may be able to roll out fabrics of higher quality, at higher speed, with less effort.

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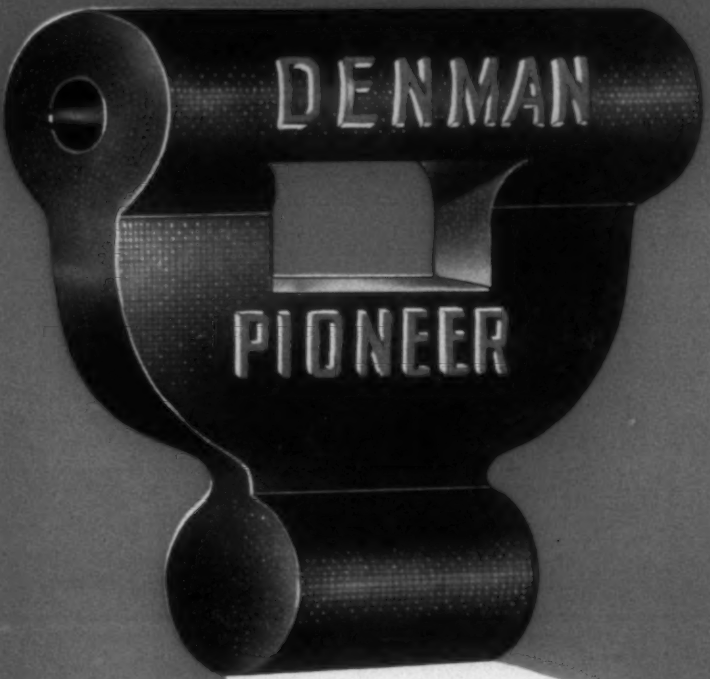

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German Textile Developments

– Additional Reports from the American Investigating Team –

Utilizing Unretted Flax & Hemp

By JOHN F. HAGEN
Callaway Mills

THE Germans had little or no cotton on hand at the end of the war. I did see a few bales of Turkish cotton in Leipzig and am told they had a small supply of cotton fabrics made of Egyptian cotton which they were using for the manufacture of rubber belting. I also understand that during the war they obtained some cotton from the Ukraine. However, essentially, they had no cotton and had to run their cotton spindles on other fibers. They made a good deal of rayon and rayon staple was spun on the cotton equipment, the capacity of which greatly exceeded the available supply of fiber. They supplemented the staple rayon supply by blending it with cottonized flax and hemp which they call *Flockenbast.*

Cotton was not the only fiber that they were short of. They had no jute and were running their jute equipment on paper yarns and fabrics, particularly for binder twine and for agricultural bags. Paper was also twisted into yarn on cotton machinery and used for book cloths and fabrics where the finer sizes of yarns from paper were required. Paper was also twisted on worsted equipment. About 22 per cent of their textile fiber production was paper, about 44 per cent rayon, 12 per cent *Flockenbast,* the remaining 22 per cent being mostly wool, although some glass fiber, ramie and miscellaneous fibers were used, the glass fiber being used instead of asbestos and the wool fiber being augmented by shoddy, rayon and *Flockenbast.*

As to cotton mill operating procedure and equipment, they were not up to the standards of our own mills here in the United States. Their work loads and production were lower than ours. Of course, with inferior grades of fibers, the work did not run as well and they had to adjust their operating conditions accordingly. However, their general practice was to run their cards substantially slower, the doffer speeds for cotton, for instance, being 8/10 RPM, and for fine denier rayons even lower. their end breakage on the spinning frames on some of the poorer quality of flax-rayon mixture, I was told, would run as high as 120 ends down per thousand spindles which is several times the breakage of the poorest running work in the United States—I hope.

The make of their machinery is German, Alsacian, English, Swiss and American. I saw some American make of spinning frames and in one mill there was a whole room full of high-speed Barber-Colman spooling and warping equipment but, on the whole, their machinery is not very modern. They have some of their spinning frames and a lesser number of their fly frames equipped with long draft of the same types as used in this country but their looms are, almost without exception, non-automatic and I could not help but feel that such mills could not survive in the United States in a normal competitive market.

During the decade from 1935 to 1945, the Germans were too busy, either preparing for war or waging war, to either develop or manufacture new textile equipment. They were, however, awfully busy trying to get fibers to spin and weave and to find chemical finishes to improve the performance and life of these substitutes and they just couldn't understand why we, in the United States, could be interested in any of their substitute material when we could get all we needed of the very best qualities of cotton and wool and jute. I don't know whether linen has the same appeal to the German as it has to the American woman to whom linen is somewhat of a magic word for textile products and she has a very decided preference for linen over other textile fibers in many types of fabrics and articles. At any rate, during the war, the Germans have had to use some linen in nearly every civilian fabric and in many military textile products as well because no cotton was available.

They had some retted flax and hemp fiber for their long fiber flax spinning system and utilized the short fibers or tow from these processes to the extent that such fibers were available. However, the great bulk of the bast fibers obtained from the unretted straw of flax and hemp which was grown primarily for the seed from which the urgently needed linseed oil was obtained.

Preliminary Work

This required considerable research and a good deal of experimental work to get these unretted bast fibers in suitable form for spinning on the cotton system. Flax and hemp are generally considered as very long fibers which have been separated by a water or biological retting process into fine fibers and processed on the flax spinning system into long "line" fiber yarn while the short fibers or "tow" were obtained as a waste product and even these short "tow" fibers are too long to be handled, as is, on the cotton system and contain a very large quantity of woody particles. As a matter of fact, however, the single flax or hemp fiber as measured by competent authorities varies considerably and even the very longest of the single fibers is only a fraction of an inch in length and much shorter than the individual cotton fiber. Therefore, it is not advisable to open flax or hemp to its single fiber but to open it only sufficiently to obtain a suitable size of fiber bundle, not only because of the shortness of the staple length and the difficulty in handling such extremely short fibers on the cotton system but also because the fiber bundle method permits a stronger yarn to be obtained.

There is considerable variation in both the mechanical and chemical treatments used but the object in all cases is to remove the "shives" or hard woody particles and to obtain a separation of the fibers into fiber bundles of the desired size. If the "shives" are not adequately removed, the yarn is of poor quality and the work does not run well in the mills. The smaller the bundle size the shorter the fibers, so, if the fibers are separated to too great a degree, they are very short and the yarn made from such fibers is weak and uneven. Sufficient separation is necessary to permit the fibers to be drawn out during the drafting processes. Fibers which are too long, or not properly prepared, produce a poor quality of yarn.

In Germany they have considerable so-called two-cylinder spinning used for short fibers or waste and it is necessary to have greater separation of the fiber for the two-cylinder spinning than is desired when the regular three-cylinder drafting process is used. The variation in the type of equipment used in the mechanical processing of the fibers is due, not only to the ideas and personal experiences of the individual manufacturer and the variation in the quality of the fiber, but, is also due to the fact that the manufacturer has to utilize whatever equipment is available as no especially designed equipment could be purchased for this purpose.

In general, in the first process, the fiber undergoes a mechanical opening and cleaning process, the type and number of machines varying from a couple of hopper type feeders combined with a willow and a shaker to an elaborate series of hopper feeders, Creighton openers, beater sections of various types including porcupine, buckley, blade type and saw-toothed surface beaters of the garnett type as well as different types of cards including jute cards and Fearnaught wool cards. Some manufacturers, preparing these fibers for the spinners, put them in the form of roving which is run through a fiber cutter, cutting the fiber to length. Others find that they get more production by eliminating the card and running it through a machine called a Catonia which consists of several sections of saw-toothed wire covered cylinders, very similar to the licker-in on the cotton card.

WHAT'S LEFT IN THE REICH

The extent of destruction to the textile industry of Germany during the war has been very considerable, according to reports reaching the U. S. Department of Commerce. The reports divide Germany into three zones: the northern zone comprises the districts of Hannover, Rheinland and Westphalia; the southern zone, the districts of Hessen, Bavaria, Baden and Wurttemberg; and the remaining area is the eastern zone, which is occupied by Russia.

A summary of the destruction of machinery in the cotton textile industry for the combined northern and southern zones shows that 2,106,606 cotton spindles were destroyed, or 29 per cent, and 42,306 cotton looms, or 28 per cent. The rayon and silk weaving industry sustained a loss of 11,076 looms, or 32 per cent. The greatest relative damage, however, occurred in the wool textile industry where 718,076 woolen and worsted spindles were destroyed, equaling 61.5 per cent; and 10,658 woolen looms, or 68 per cent. In addition to actual destruction, machinery loss is a continuing factor, due to exposure and looting.

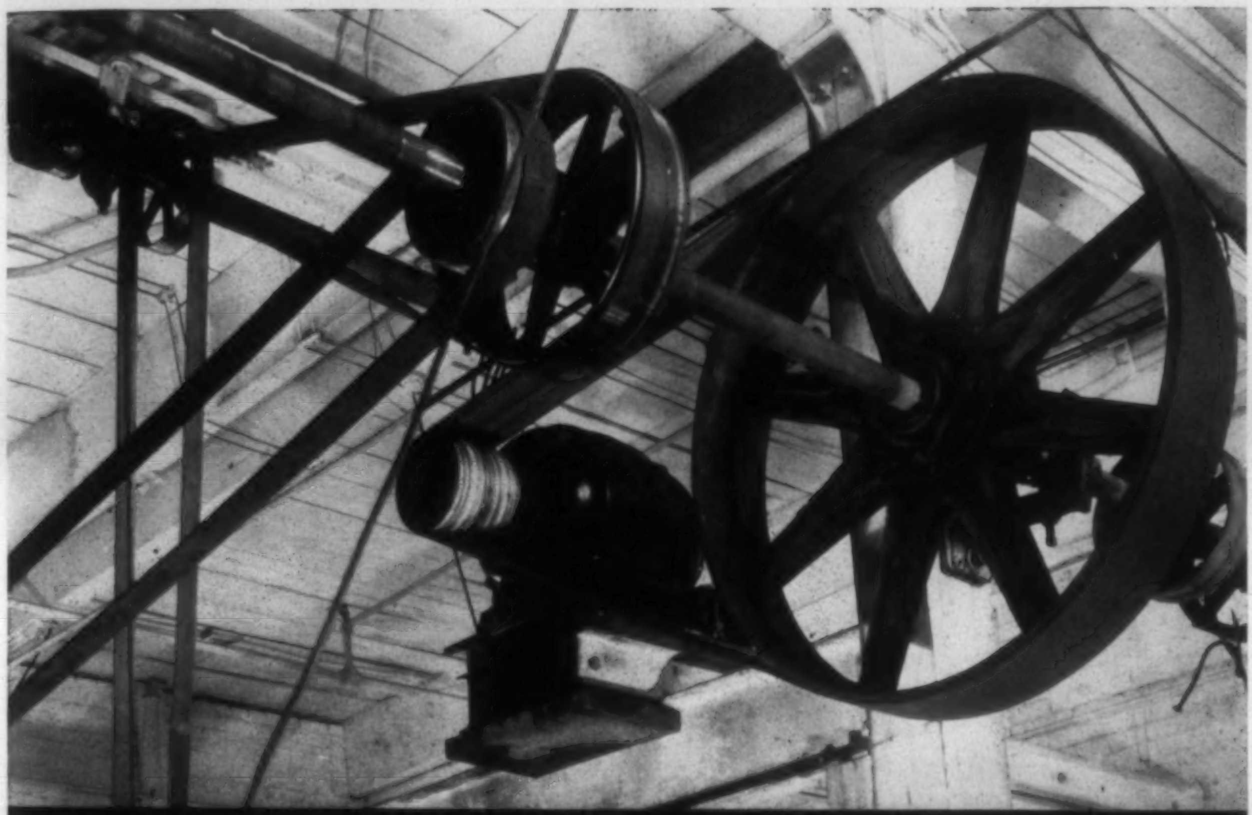
The amount of waste taken out runs from 40 to 50 per cent of the fiber as received from the decorticating plant. After the flax or hemp plant is harvested by mowing machine, it is taken to the de-seeding plant where the seed is removed and the stalk is then run through the decorticating machine which is a mechanical flexing of the stalk such as would be obtained by coarse fluted rolls which breaks up the woody part and separates it from the fiber part. The fibers are then collected and dried in an oven after which they are shipped to the plant which is to prepare the fibers for the spinner. About 15 per cent of the weight of the stalk is fiber. The chemical process is for the purpose of retting. In this process the object is to decompose the pectins and agglutinating substances so as to separate the fibers. There are two principal methods for chemically preparing unretted flax and hemp, in most general use during the war, being the so-called alkali or caustic soda method which is less expensive than the second which is a combination of an alkaline treatment and a chlorination called the Korte process.

Much Processing, Little Result

We only now have the fiber ready for the cotton mill process. The mill processes again vary somewhat from plant to plant but, essentially, it is first run through the usual cotton mill type of bale opener, hopper feeder and Creighton opener, after which it is sometimes put through a Kirschner beater section and a woolen type card or it may go direct to a mixing or blending room or blending unit. Here the flax or hemp fiber is mixed with rayon staple in the proportion of 40 per cent flax, 60 per cent rayon. It is never run 100 per cent flax, always mixed with rayon. Thereafter it is processed through the pickers, cards, drawing, fly frames and spinning in the usual manner. Some difficulty is experienced with the card clothing filling up with the short broken fibers and the work does not run as well in spinning as a 100 per cent staple rayon or cotton fiber but there appears to be no great difficulty in processing it on regular cotton mill machinery after it is blended with rayon. Also, in the preparation of the warps and in the weaving of the 40-60 blend there appear to be no manufacturing difficulties.

This seems like a "helluva" lot of work to those of us who have been handling cotton or rayon staple, and it is, and the amount of usable fiber obtained is very small compared to the tonnage of flax or hemp straw harvested. The mechanical operations, however, while extensive, are not expensive operations from a labor standpoint as the machines are large volume producers. However, the final cost of the yarns and fabrics made from *Flockenbast* or cottonized flax and hemp fiber is greater than for 100 per cent spun rayon or cotton fabrics. The product contains flax and has a high wet strength which offsets the low wet strength of the rayon blended with it and the fabric made therefrom has also desirable characteristics of linen including such qualities as good absorption and quick drying properties as well as the magic designation "part linen."

I would hesitate to say offhand that the utilization in this manner of the seed flax straw now available in the United States is practical. However, one German concern, shortly after World War I, started making a fabric



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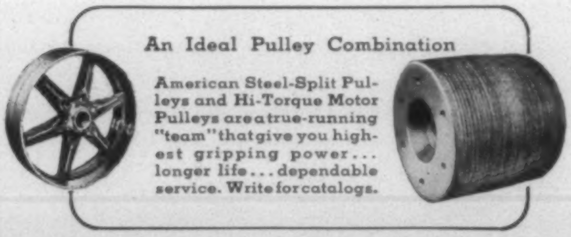

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of 50 per cent flax and 50 per cent cotton which they spun on their cotton system equipment and for which they became famous. This fabric was known as "Gminder Halb-Linen" and found extensive use for women's dress goods, so it must have some special appeal and competitive value in normal times.

The object of the expensive chlorinating process is to obtain a better separation of the fibers, a cleaner yarn, free of woody particles and a softer and finer yarn. Most of the production of 40-60 *Flockenbast* yarns has been in coarse numbers up to 12's cotton count which is obtainable with the alkaline or caustic soda chemical retting operation. The fabrics and articles made of these yarns include such household items as bed linen, towels, table coverings and draperies; clothing, such as dress goods, work clothing, shirtings and pajama fabrics; and some underwear and other knitted fabrics and garments. Military items such as shelter tent halves and protective coverings of duck type fabrics as well as some types of military work clothing were also made of *Flockenbast* yarns. With the chlorinating process, it is claimed that 40-60 blended yarns of *Flockenbast* and rayon up to 30s cotton count can be spun and woven into fine handkerchiefs and shirts. The combination of rayon and cottonized flax or hemp dyes and prints very well. Some attractive and serviceable fabrics and articles of these mixtures have been seen. While the improvement in the wet strength is due to the bast fiber content, the soft rayon fiber tones down the roughness of the flax or hemp fiber making a satisfactory combination.

It seems to me that while this development should not be entirely overlooked there undoubtedly is a good deal of sense in the Germans' idea that we already have a darn good textile fiber and possibly we don't fully appreciate the wonderful cotton fiber which we have in such abundance.

Woolen & Worsted Industries

By WERNER VON BERGEN
Forstmann Woolen Company

MEASURED by the number of looms, combs and spindles, the German woolen and worsted industry was nearly twice as large as our own. Twenty-three per cent of all the looms, 20 per cent of all the combs and 22 per cent of all the spindles in the world were found in greater Germany. The woolen mill are all vertical plants. The larger ones employed between 800 and 1,000 workers, operating from 6,000 to 10,000 spindles and around 200 looms. Most of the worsted mills are horizontal plants, doing only combing or spinning, or having combing and spinning combined. There are very few plants where worsted spinning is combined with weaving. Some of these plants compare favorably in size with our American worsted mills.

Talking about destruction, many of these plants are in perfect shape, in Hannover about 40 per cent of the combing capacity is destroyed and in Leipzig the average destruction is 50 per cent, whereas Dietel in Wilkau again is undamaged. The destruction of the woolen mills was generally small because most of these mills were situated in smaller cities where bombing was not excessive.

Prior to the war, Germany, in order to supply her industry, imported about 90 per cent of the raw wool required. Therefore, this industry was one of the worst hit by the war. The best illustration of how worsted plants were forced to change from wool using units to substitute fiber plants is shown by the records of the Bremer Wollkaemmerei. In 1938 this plant produced 70 per cent wool top and noils and 30 per cent rayon top and noils, whereas in 1944 the wool percentage had dropped to 25 per cent, the rayon increased to 47 per cent and flax and hemp amounted to 28 per cent.

The main woolen fabric the German woolen industry had to supply during the war was the standard uniform cloth, the so-called Einheitstuch. The studies made on the manufacturing procedure for this cloth can be used as a basis to discuss the various developments in material, manufacturing processes and machinery used. The German standard uniform cloth was a 24 to 25-ounce fabric of the Melton type, 56 inches wide, 42 ends and 47 picks per inch finished cloth. The warp was a two-ply yarn consisting of single 33 worsted and single 3.1 run woolen yarn, whereas the filling was a single 2.8 run woolen yarn. The weave was a 2/2 reversed twill. This weave was adopted in 1943. Prior to this a plain weave was specified. The fabric was used for the uniforms as well as for the overcoats. The quality of the wool used became coarser as the war progressed, starting with 62s/64s in 1939 and ending up with 58s grade in 1943. The rayon staple fiber was mainly viscose 3-3/4 denier, two to three inches long for woolen yarn and four to five inches long for worsted yarn. When no viscose type was available, cuprammonium as well as acetate rayon were used.

Manufacturing Processes

All German mills used the soap-soda process. No special new machinery of importance was in evidence. The German Government, well aware of the importance of wool grease in war time, had issued orders that only those plants with grease recovery equipment be allowed to scour wool. At the outbreak of the war the wool grease production was confined to three large combing plants in north Germany. Their normal production of grease amounted to approximately 12 million pounds annually. All three plants treated their scouring liquor with acid and the separated grease was then recovered with naptha. Two of the plants refined the grease further for pure lanolin, wool grease-fatty acids and various wool waxes.

The dyeing of the uniform cloth was done in the stock for the woolen yarns and in the top form for the worsted yarns. The wool was dyed with vat colors, Helindon type, whereas in top dyeing chrome colors were used. The reason was that the dyers found it too difficult to apply the vat colors in a customary top dyeing machinery. The reworked wool portion was dyed with chrome dyes, on account of the tanning effect produced through the chrome. Rayon staple fibers could be either dyed with vat or sulphur colors, or spun dyed. Towards the end of the war there was no more pure wool waste available and as straight chrome dyes have no affinity towards the rayon staple fibers, the dyers had to use dyes which had affinity for both, animal as well as cellulose fibers. All mills visited used high grade stainless steel dye equipment of the conventional type.

The combing, drawing and *(Continued on Page 42)*

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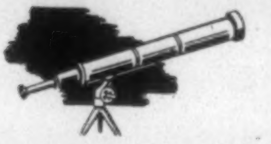
Looking at the Future of Cotton Textiles



Remarks of WARD DELANEY, President, Institute of Textile Technology, Before Southern Combed Yarn Spinners Assn.

IN respect to the future of cotton yarns, I think we must approach the subject from the over-all viewpoint of the entire cotton textile industry, because each operation makes some contribution to the ultimate cost of the product.

We must look at cotton first of all from its position as a raw material. We must look at it in relation to the processes through which it passes, and although we do not as much as we should, we must look at it from the standpoint of its ultimate end-use. I think the time is at hand when the cotton textile industry as a whole should present itself to specialists in the field of diagnosis and have analyzed every phase from beginning to end, and then form conclusions about such things as might be done to make a contribution to the whole bodily structure, for the whole is no stronger or healthier than its weakest segment. Yarns alone cannot be appraised. Research, as we term it, is a much abused word, and in many of the processes through which cotton passes, development or engineering might be a more correct term for that which is to be done.

I think in looking at the situation rather objectively and cold-bloodedly, the two things that concern the industry most are first, price, and second, uniformity. I say price because the cost of treatment or processing is a factor in price structure. For price in many instances determines whether or not you have a good market, and each process through which cotton passes—mechanical, economical or physical—costs something, and it behooves us to analyze each of these processes to determine the contribution it makes and whether or not the cost of that process can be reduced. There are not two other factors that enter; first, competition, which plays a great part in economy; the other, which is beyond my realm, is the question of public acceptance. While public acceptance has not much to do with scientific research, it is important with reference to markets and volume.

I think it might be proper here to pass on to you a slight concept I gained from a survey of this industry in conversations with a number of people who know the answers. The question was: What gains from the war effort have come to the textile industry in the field of new processes, new products or new markets that the industry proposes to keep permanently?

On the subject of improvement or processes or things that have come to our industry, I know of only one, and that is a product known as Shirley cloth, a development by Dr. F. T. Peirce while he was associated with the Shirley Institute of Manchester, England. What has been done in the Shirley Laboratories has given a new approach to the variety of problems not heretofore even relatively solved, and a basis for new thinking and new effort in the field of fabric design.

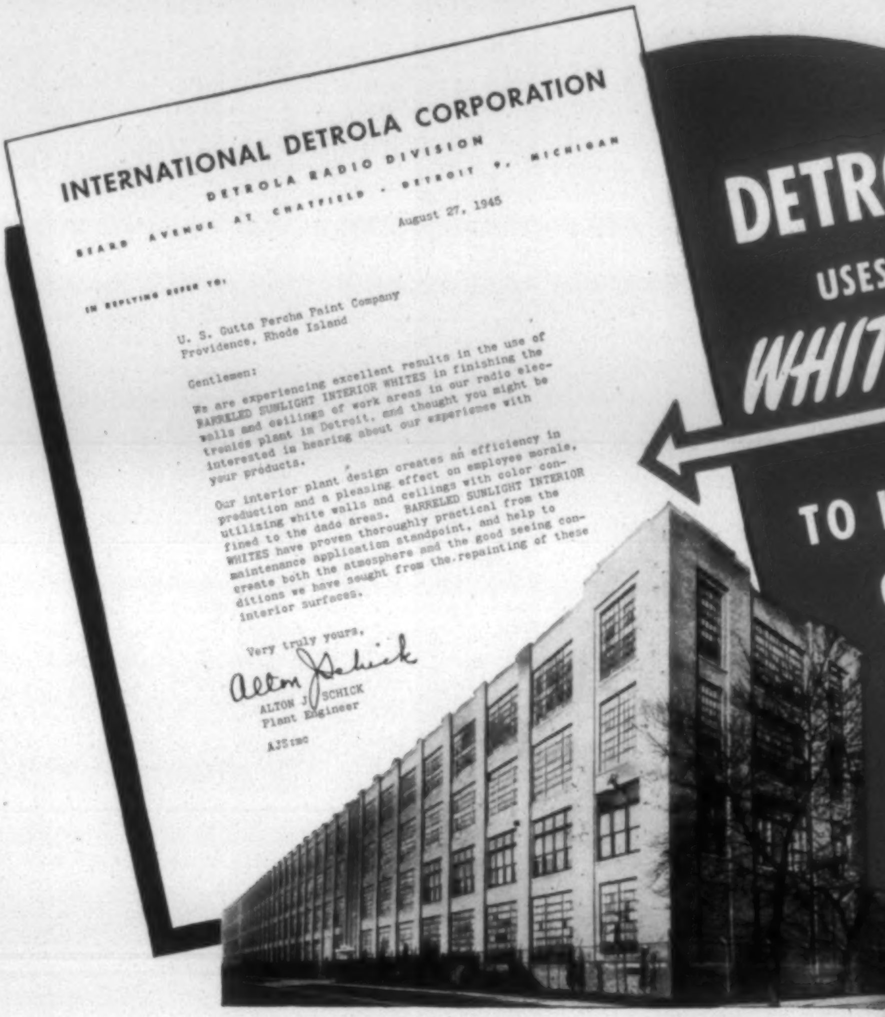
We do know that there are now in process in other laboratories as well as in our own, projects involving fabric design, water repellency, and one of the oldest problems of the industry, warp sizing, and many others of great interest to the industry, from the solution of which can come great economies. But there has not come to our attention as a result of this war any new operation or any elimination of an operation that will in any sense revolutionize our industry. This brings squarely home to us the fact that we must prepare our own future. It has not deen done for us. The responsibility rests on us. Here are a few approaches to a few things which are revolutionary in nature towards which we are perhaps headed, and which I will leave with you as thought-provoking.

Mechanical Cotton Picking

You are all aware through the trade press of the mechanical cotton picker, and you are all conscious of what its influence cost-wise will be in the farm process or phase of this industry. You are all aware of the fact that in Memphis, Tenn., the ground is being broken by International Harvester for a large plant to manufacture mechanical cotton pickers. If anybody had said 25 years ago that cotton could ever be picked except by hand and mostly by Negroes, he would have been laughed out of the room. But here it is! The ultimate end-users pay high prices for cotton. This mechanical picker will effect an economy in harvesting, and I would like to know why it is not to be passed to me as a consumer. Will the gains that come economically from that be passed on to the ultimate consumer, or will they help the grower only? Since a contribution is being made by the harvesting phase of the industry, isn't the responsibility of the processor in all the other phases greater?

Will the gains from that particular operation help you or will they be capitalized upon and kept as part of the profit that comes to farmers or individuals between them and the next phase, the gin phase?

If we are successful, and I say "if" because objectives must be proceeded by that word, in the field of research, if we are successful in getting from the mechanical cotton picker an enormous contribution to that phase, it makes us look more carefully to the next phase, gin-



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SPECIALISTS FOR NEARLY FIFTY YEARS IN MAINTENANCE PAINTS FOR INDUSTRY ning. Undoubtedly Eli Whitney's contribution was a marvel of that age when it was developed. I doubt, however, if anybody here would accept the statement that removal of lint from seed by the present gin is the last word in that process. Lint is now being removed from the cotton by chemical means, and this has been done as far back as 1937, for the purpose of accelerating propagation. Work is now being done to remove lint from the seed without degrading the fiber, and when this is successfully accomplished and made commercially practicable, its effect will be far reaching on staple neps and the product that you receive, and on the tremendous investment that the textile operator has to make in machinery for opening, picking, beating and carding. Neps are not found in unginned cotton. If chemical removal is successfully accomplished commercially, the next step is a process, either electrically or aerodynamically accomplished, of taking the fibers as they leave the fiber separation process, separating the long from the short either on a metal belt by means of electrical charges or by means of controlled air, which will flow the longer, heavier fiber in one direction and the shorter lighter fiber in another, bringing you silver or lap, depending how it is handled. Here again comes the question of costs. Will that saving be passed on to the ultimate consumer or retained by the individual who perfects that process?

Now we come to the subject of baling. At the time our first cotton was put on the market, we were required to ship it to Manchester, England. There was no domestic market. When the textile industry came to New England, we continued to ship cotton to New England in bales. As the cotton industry moved south and built itself in the moddle of the cotton fields, we still continued to ship to warehouses and let them ship it back to the consumer in bales. Now, then, summarizing that situation, it seems to me, as and when the previous two processes are successfully operated, you will object to receiving at your mill bales of cotton, for there again comes matting, tangling and distortion, imposing upon you the burden of disentangling, the orientation and parallelizing of fibers at great expense, and probably without necessity, for that condition was brought about at the gin. This subject, then, becomes one for a specialist in packaging and distribution, and it is a problem that could probably be solved, resulting in reat economics.

It must be viewed purely from the additional transportation charges alone, but in the light of the elimination of a goodly portion of the investment required for opening and cleaning machines.

Uniformity

Uniformity is close to the hearts of all textile operators. But we must remember that cotton is an agricultural product and a raw material when it comes to you, and is subject to the variables which affect its form and substance. The synthetic fiber manufacturers' start in the field of mechanical control was not so auspicious as it might have been, and their results were not immediate. They solved their problems through chemistry and engineering, and it seems to me that chemical processing of the cotton fiber at the door of your mill before you do anything else to it is a condition precedent to what might be termed scientific uniformity. This is a subject for chemical research, and a real opportunity.

Competition

Cotton is the most important, the most versatile, the most reliable of all fibers over a tremendous field of use. We laud cotton and say fine things about it. Leadership always has its penalties. It is constantly being challenged. It carries with it a responsibility for justification of its position. Has the cotton textile industry properly supported cotton in its effort to maintain its position? I grant much money has been spent in research; much money has been spent in the getting and maintaining of markets. However, I think that economic research could very well team up with scientific research and have a great influence on the maintenance of cotton's dominant position. That would mean a careful survey by qualified economic groups of declines in markets, a careful searching out of the reason therefor, which we usually find in the field of end-use; the bringing back by the economic specialists of the results of their fact finding program; the submitting of this program, properly interpreted, to properly qualified and well financed research institutions wherever they might be, having in mind their qualification to modify the product for this particular use by redesigning or retreating it for the particular job it does

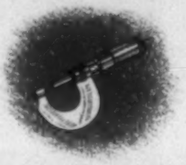
There has been a great deal of scientific research done in the industry, much of which could be termed sporadic, but in my judgment the greatest good can come from this teaming up of the specialist in the field of economic research and the scientific group qualified to solve the problem. I do think the opportunity for real contribution comes from groups such as the Southern Combed Yarn Spinners Association, the National Cotton Manufacturers Association, the Cotton-Textile Institute, the American Cotton Manufacturers Association, the state associations, colleges and other organizations.

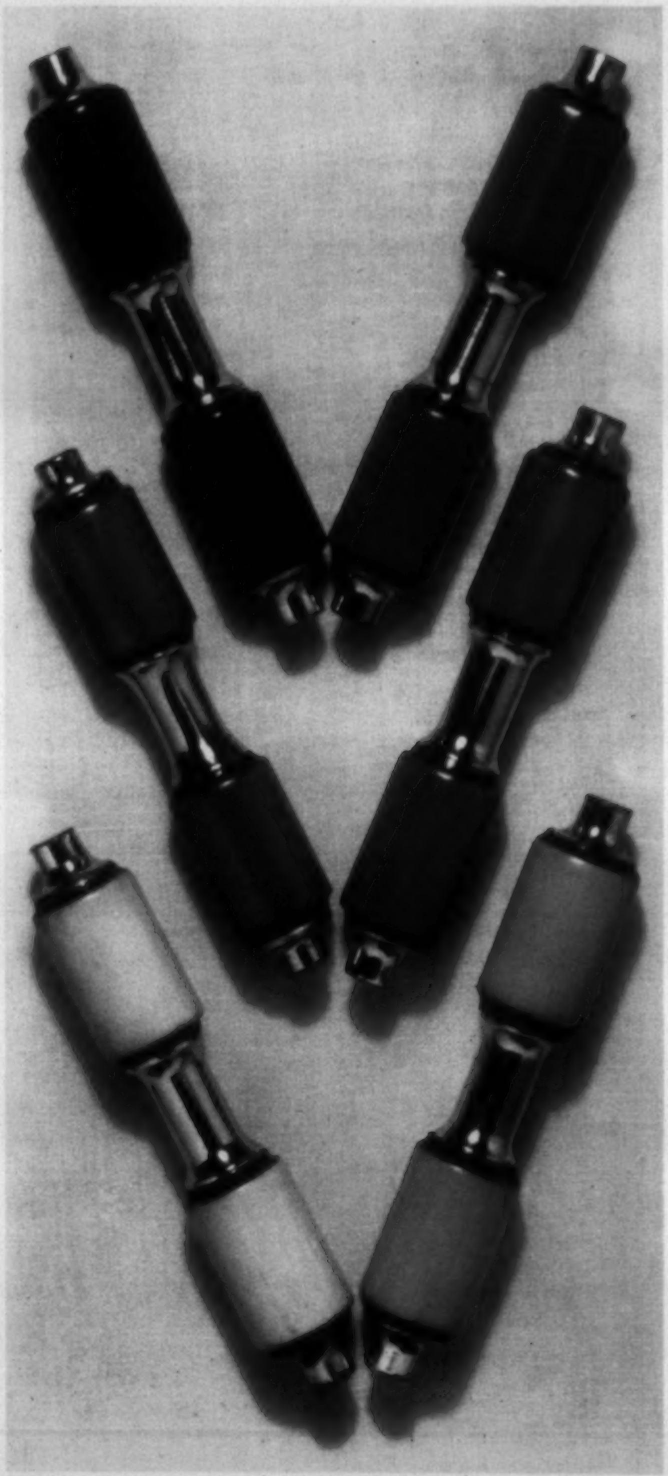
Blends

Now, then, comes the field of blends. Cotton is one of 130 vegetable fibers, all related. Today we use only five in large measure. The Indians before we came used 36 fibers. If in the metallurgical field science had utilized only two of available metals

(Continued on Page 26)

MEASURING UP





● Frankly, what is the definition of the IDEAL Roll Covering? Wouldn't you say that any Roll Covering that can answer "yes" to *all* of the following twelve questions could truthfully be termed IDEAL for the spinning job?

1. **Does it automatically stop spinning when it makes bad yarn?**
2. **Does it retain its cushion and resiliency in low temperatures and as long as it will draft?**
3. **Does it resist flattening or fluting over the week-end?**
4. **Does it require a standard diameter arbor?**
5. **Is it impervious to excessive humidity?**
6. **Does it produce a minimum of eyebrows?**
7. **Does it eliminate lap-ups as long as it will make good yarn?**
8. **Does it eliminate cockled yarn, other factors being correct?**
9. **Does it produce yarn of maximum strength for a given staple, other factors being correct?**
10. **Does it require a minimum of attention?**
11. **Does it function properly ALL the time until worn out?**
12. **Has time proved it any better than the 600 odd "improved" roll coverings that have come and gone?**

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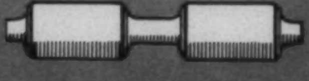
Griffin, Ga. . . . . B. C. Plowden
Utica, N. Y. . . . . . . William A. Roberts
Dallas, Texas . . . . Russell A. Singleton



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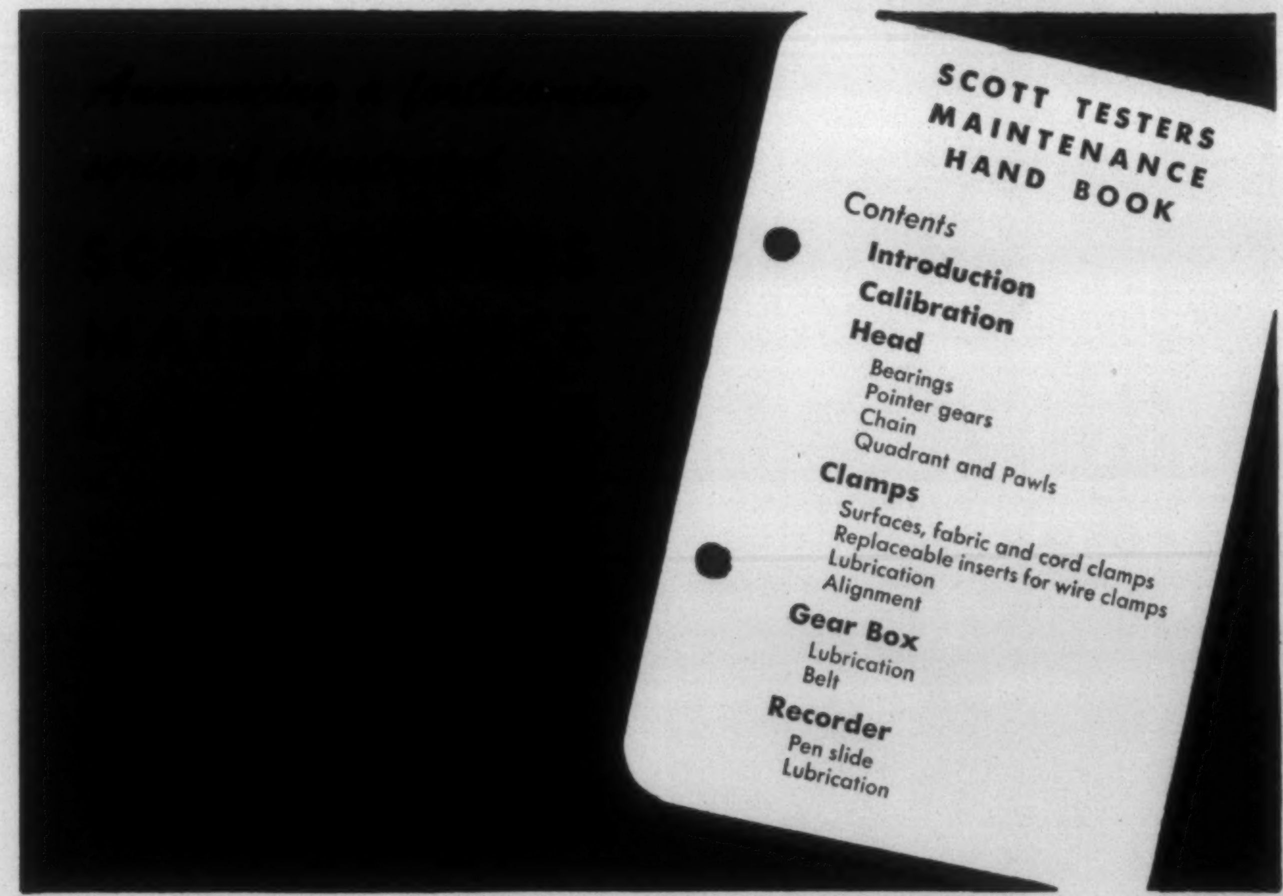


SCOTT TESTERS
MAINTENANCE
HAND BOOK

Contents
Introduction
Calibration
Head
- Bearings
- Pointer gears
- Chain
- Quadrant and Pawls

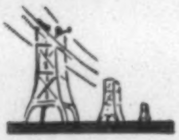
Clamps
- Surfaces, fabric and cord clamps
- Replaceable inserts for wire clamps
- Lubrication
- Alignment

Gear Box
- Lubrication
- Belt

Recorder
- Pen slide
- Lubrication

MASTER MECHANICS' SECTION

Good Mill Lighting



Part One of a Series by JAMES T. MEADOR

MILL LIGHTING is a term that has in the past been used by the manufacturers of all types of lighting fixtures and equipment and offered to the textile mills as being "good for what ailed them," whether it was high cost of production, low volume of production, or anything else.

We will readily admit that the new type, improved lighting equipment, such as fluorescent fixtures, has made wonderful strides in improvement of production and reduction of costs in all types of mills and factories. In fact, so much has been said about this equipment that nothing much has been able to come to the top about the most important part of all lighting installations—proper and adequate wiring. In this series we will attempt to set forth a number of examples of wiring systems together with transformer connections, arrangements, etc., which are now in successful operation in various textile mills of this territory.

The problem of wiring for any type of lighting system must be approached from a practical point of view, and with the principal purpose of maintaining full voltage in the circuits right up to the lighting fixture itself. That is, the first step is to determine the current load in amperes required or the proposed number of lights, which is done by taking the wattage of one fixture and multiplying by the number of fixtures to be installed, then divide this figure by the voltage of the system, usually 120 volts. This, then, gives the number of amperes of current required, which will determine the size of wire for the system without overheating. It also will determine the size of fuses for the circuit, which in turn specifies the rating in amperes of the switch required.

Let's have an example to bring out all this in a plain and practical way: suppose that we want to light a spinning room with 100 of the usual type of fluorescent fixtures, using two 40-watt tubes each, we then will work it out to obtain the wire size for the feeder circuit to operate these lights: 100 watts × 100 fixtures = 10,000 watts total, 10,000 watts divided by 120 volts = 83.3 amperes.

Reference to pages number 44-S § 45-S of the Supplement of the 1940 National Electrical Code will show these sizes in the corresponding types of wire can be used: No. 2 rubber covered wire, No. 4 varnished cambric wire.

But, wait a minute! There is another factor to be taken into consideration at this point. One that is almost of equal importance if you don't want your fluorescent fixtures to be always flickering on and off, or your incandescent lamp bulbs glowing a dull red like a weak Christmas tree light. That factor is voltage-drop, and it is ever present in electrical systems, especially lighting.

For our purpose we can bear in mind this: *long lines on lighting circuit voltage* (usually 120 volts) *have excessive voltage drop.*

Well then, you ask "How are we going to avoid this evil of all good lighting systems?" The answer is easy—avoid long feeder circuits of lighting voltage (120 volts) by the practical arrangement of lighting transformers in such a manner that each area or section of lighting is served by its own transformer in a location as nearly central as possible.

With this lighting current (120 volts) being delivered by the low voltage side of the transformer, the high voltage supply or primary circuit may be either 2400 volts, 600 volts, 480 volts, or even 240 volts. This brings out another fact—*the higher the voltage, the less the voltage drop.*

Now, with these two fundamental facts kept before us, (1) current loading of wires and (2) voltage drop, we are in position to proceed with an example of lighting a typical cotton mill, such as the Woodlawn Plant of the American Yarn & Processing Co. of Mt. Holly, N. C.

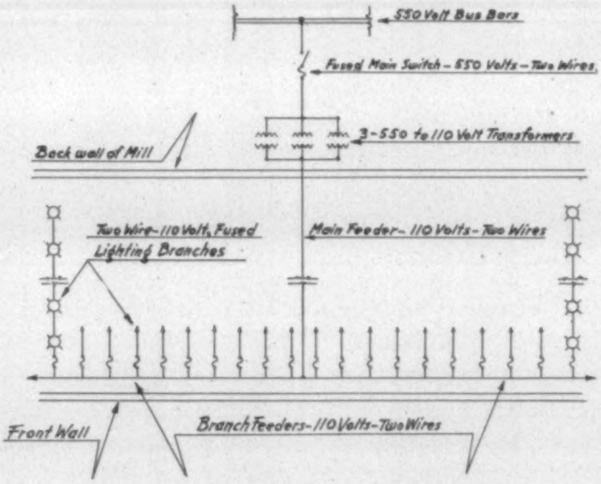

550 Volt Bus Bars
Fused Main Switch - 550 Volts - Two Wires.
3-550 to 110 Volt Transformers
Back wall of Mill
Two Wire-110 Volt, Fused Lighting Branches
Main Feeder - 110 Volts - Two Wires
Front Wall
Branch Feeders - 110 Volts - Two Wires

Diagram No. 1—Circuit as set up for old system.

The mill lighting system originally consisted of a group of three transformers, 550-volt primary, 110/220-volt secondary, all connected 110 volts in parallel, as shown by the following wiring diagram.

This original system delivered lighting current at about 110 volts in the center and only 85 to 90 volts at the extreme ends of the mill, which caused the fluorescent lamps to either flicker on and off, or to simply stay off, and caused the incandescent lamp bulbs just to give a weak glow, all of which was very unsatisfactory in the operation of the plant. When the situation got to the point of necessary action, the problem was studied from two angles:

(1) Conversion to the three-wire, 120/240-volt, grounded neutral (Edison) system, which would have called for three wires from the transformers all the way across the mill to the front wall in order to tie into the branch feeder circuits. This plan would not have improved the situation much as there still would have remained long runs of 120-volt lines, so was discarded.

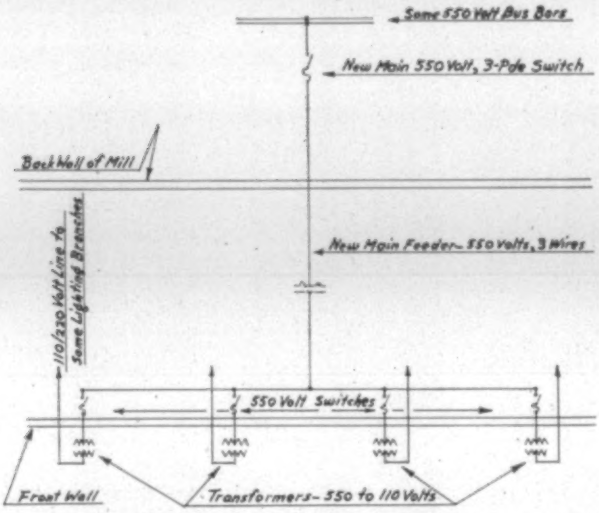

Same 550 Volt Bus Bars
New Main 550 Volt, 3-Pole Switch
Back Wall of Mill
New Main Feeder—550 Volts, 3 Wires
110/230 Volt Line to Same Lighting Branches
550 Volt Switches
Front Wall
Transformers—550 to 110 Volts

Diagram No. 2—Circuit rearranged for unit system.

(2) Conversion to the *unit system*, which required the removal of the transformers to new mounting positions on the front wall of the mill building, and the extension of the 600-volt line from the bus bars above the switchboard through a fusible, enclosed, three-pole, safety switch across the mill in conduit to a junction box at the front wall, and thence in both directions along the inside of this wall to the transformers through branch fusible switches. Diagram No. 2 shows the arrangement of these circuits, and Diagram No. 3 shows primary and secondary connections of transformers.

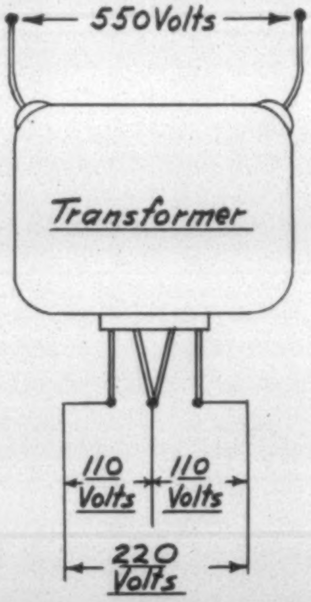


Diagram No. 3—Transformer connections.

Upon consideration of the amount of lighting load involved, it was determined that a fourth transformer should be used to more evenly distribute this load and yet maintain the voltage on the branches at the highest point, which, by means of the arrangement as shown in Diagrams No. 2 and 3, was held to 120 volts at the fuse blocks on the branches, and 118 volts at the extreme ends of these branches, independently of the load conditions of the mill.

TEXTILE BULLETIN invites any one who desires one of the Electrical Code books with the supplement, to address requests to P. O. Box 1225, Charlotte 1, North Carolina.

The Future of Cotton Textiles

(Continued from Page 22) and had not developed the large number of blends, where would mankind be today from the standpoint of comfort and convenience?

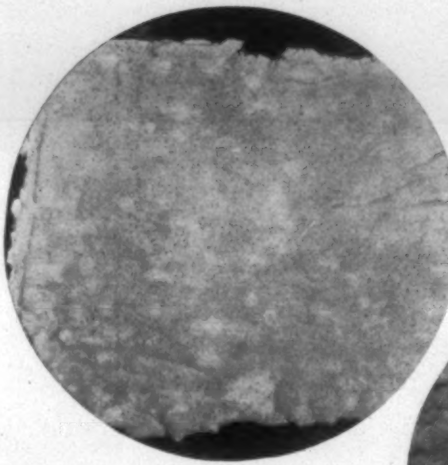
Cotton is the most versatile of all the fibers. It lends itself exceedingly well to blends not only with the vegetable fibers, but protein fibers and mineral fibers, and blends well with synthetic fibers, providing character and use not possibly by either alone. When blending is given serious study it will have a definite influence upon the field of fabrics and the field of plastics, from which will come many new uses and greater efficiency in old ones. Also in the field of related fibers, ramie and others offer large unexplored fields, which are a real challenge to science.

The cotton textile industry has not been as progressive promotion-wise as it should be. In most cases it leaves merchandising of the product to the converter or the manufacturer. Very few of the advances made in cotton textile technology have been capitalized on to make the ultimate consumer conscious of these improvements, and to let him tie them in with names of brands. This is not true of the synthetic fiber group. Each one of the manufacturers there has given his product a name to which he constantly points with pride and constandly emphasizes in advertising. The manufacturers of rayon alone are spending about $24,000,000 each year on research and development. They are planning large plant expansion and are constantly seeking new scientific brains. One of them recently announced that it will engage in the manufacture of machinery for the processing of its product because it is not satisfied with the facilities available in present day machinery.

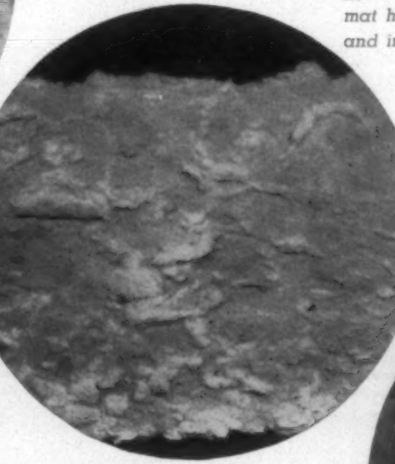
In conclusion, I think I can correctly say that the future of cotton yarns and the future of the cotton industry generally will lie largely in whether or not its sponsors recognize its dependence upon technological progress rather than on economic and political considerations. The industry must make a better product, at a lower price, in a greater quantity. If the cotton industry would provide funds for research and development in the same ratio to its market that the synthetic fiber people provide in proportion to their markets, I could predict a much more healthy future for cotton yarns and the cotton industry in general.

An *Industrial Site Survey* of the Greenville, S. C., area has been published and distributed by the Greenville and Northern Railway. All factors relative to plant locations are covered in the booklet.

Air leaving the Saco-Lowell
Air Filter is DUST-FREE



1. *Top side of the mat removed from the screen of the #6 Air Filter showing how the impurities from the air are used to build up an efficient filtering medium.*



2. *Reverse side of same mat showing how mat hugs screen preventing leakage of dust and impurities.*

3. *Showing fine particles of dust and other impurities that have passed through the filter mats, (Figs. 1 and 2)—but have been removed by the finely woven filter cloth in the terminal section.*

The Saco-Lowell Air Filter means the end of the dangerous, disease-breeding dust room. Now for the first time, the recirculating air in the opening and picker room can be fresh, clean, and free from impurities.

Tests have shown that in the Saco-Lowell Model 6 Air Filter the tightly woven terminal filtering medium removes from the air stream the most minute particles of *silica oxide* and other seriously harmful impurities. This principle of air filtration, developed by Saco-Lowell, has been effectively incorporated in the Model 6 assembly.

Remember, these microfine particles of dust are an ever-present menace to the health of your operators—are a fire hazard—and also can affect the efficiency of your equipment by settling on the moving parts of your machinery.

There can be no doubt that this new development will bring an end to the conventional dust cellar which is such a natural breeding ground for disease as well as a constant fire menace.

Our engineers have some facts on this Air Filter which we are sure you'll be interested in looking over. A card to any one of our offices will bring you the complete story.

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MILL NEWS

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

Martinsville, Va.—A $400,000 addition to the warehouse storage facilities of the E. I. du Pont de Nemours & Co. here is being pushed, in addition to a large manufacturing addition to the nylon plant to cost several million dollars.

Danville, Va.—A $2,400,000 construction and equipment program to increase facilities of the Riverside and Dan River Cotton Mills Co., Inc., will provide for a new filter plant and cotton warehouse, installation of new boilers and generators and extensive replacement units in the finishing plant. The new filter plant, to be completed in the spring, will double the mills' present capacity of 4,000,000 gallons of water daily. Improvement of the company's power plant at a cost of $900,000 will be the largest single project. The cotton warehouse will be seven stories high and will provide 162,000 square feet of floor space. Finishing machinery will be installed gradually so as not to disturb present production.

Macon, Ga.—Activities of the Bibb Mfg. Co. during World War II and plans of the company during coming years were reviewed in the Oct. 26 "victory" issue of *The Bibb Recorder*. The issue contained messages from officials of the firm, who stressed the importance of workers' contributions to the company war record and their individual responsibility in the reconversion process. One page was devoted to a tribute to Bibb men who lost their lives during the war.

Burlington, N. C.—A general expansion, modernization and consolidation program for Celanese Lanese Corp. here, which will cost $750,000 and approximately double present plant capacity, has been approved by Celanese Corp. of America, parent company. Contract for construction of a two-and-one-half-story extension to the present plant already has been let. Expansion plans also provide for a lunch room, with meals prepared by the company at a minimum charge to workers. A second phase of new construction will include substantial additions to the picker-house, yarn conditioning section, shipping room and the installation of a new boiler house. Considerable additional machinery also will be moved into the plant.

Westminster, S. C.—Contract for modernization of the approximately 80 houses in the Oconee Mills community here has been awarded. The houses will be remodeled throughout, with installation of new hardware, wiring and floors.

Goldville, S. C.—Contract for a $1,500,000 expansion program at Joanna Textile Mills Co. here was to have been let Oct. 30. Enlargement plans provide for a four-story annex of concrete, brick and steel. It will provide space for revamping of the machinery in the card and weaving rooms, and 200 employees will be added to the payroll when expansion is completed. Also included in the construction program are 50 residences and a 12-unit apartment house.

Greensboro, N. C. — Expansion of Burlington Mills Corp. activities in broad loom fabric production into Canada is being effected through a deal with Dominion Textile Co., Ltd., of Canada, according to an announcement by Britt M. Armfield, vice-president in charge of foreign operations. Stock ownership in the new company which will be known as Dominion Burlington Mills, Ltd., will be equally divided between the two parent companies.

Glen Raven, N. C.—Glen Raven Cotton Mills and Glen Raven Silk Mills will establish their own selling agency, under the management of J. H. Bumstead, in offices to be opened Jan. 1 in Room 5518, Empire State Building, New York City, to handle the exclusive sales of the mills' products. Merchandising of the products has been handled by McCampbell & Co., who sold their woven awnings stripes, and by William Whitman Co., who sold their rayon dress goods. The present move is in line with the company's program for distribution of its own products. Mr. Bumstead has been associated with the textile industry for over 20 years.

Shelby, N. C.—C. V. Richardson of Star, N. C., has purchased Buffalo Cotton Mills near here and is operating the business in the production of yarn for his hosiery mills at Biscoe, N. C., and elsewhere. Irvin Turk, former manager of Buffalo, has announced that he plans the establishment of another mill near Shelby if he is able to obtain a building for machinery which he had purchased for Buffalo Mills.

Cornelia, Ga.—Construction of a plant to process Lumite plastic filaments into woven insect screens and plastic fabrics, to be known as the Lumite Division of the Chicopee Mfg. Corp. of Georgia, began Nov. 1. The plant, of modern design and construction, will be one story, covering approximately 54,000 square feet. Harry H. Purvis will be general manager of the Lumite Division. During the war, the Lumite plastic insect screens have been manufactured at the Chicopee, Ga., plant, most of the product going to the armed forces.

LaFrance, S. C.—A new $75,000 community building for the Pendleton Mfg. Co., division of LaFrance Industries, is in process of construction here. The building will replace several obsolete structures and will be two stories in height, facing the entrance of the mill. It will house administrative offices, employees' cafeteria, general assembly room and first aid and clinic departments, and commissary.

Gastonia, N. C.—The Gastonia Combed Yarn Corp. has purchased control of the Morowebb Cotton Mill at Dallas, Gaston County. The Morowebb Mill has been in constant operation since 1903 in the manufacture of combed cotton yarns 38s to 90-1s and ply, in warps, skeins, cones and tubes. Its equipment consists of 7,400 ring spindles. It is capitalized at $100,000.

PAGE
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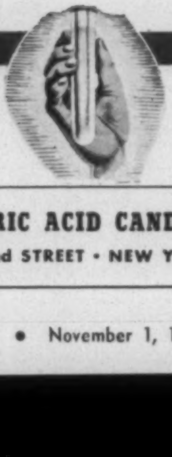

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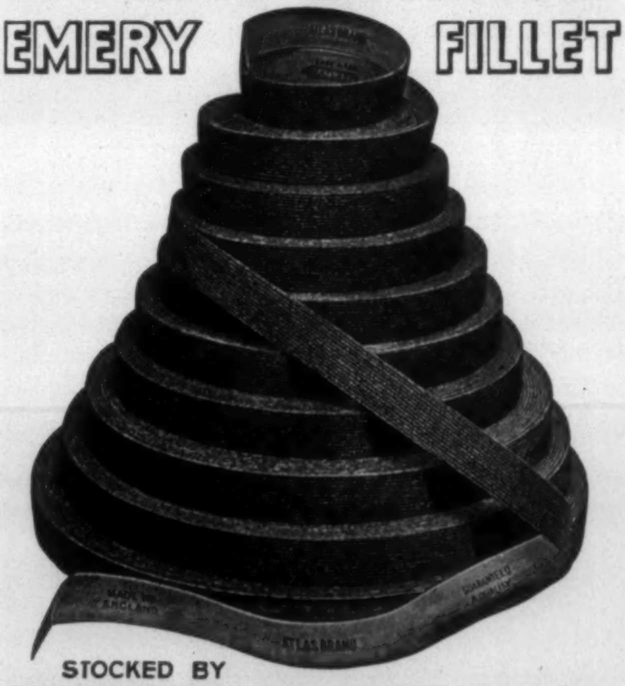

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THE PRINCIPAL MILL SUPPLY HOUSES
AND CARD MAKERS

Promotions, Resignations, Elections, Transfers, Appointments, Honors, Notes on Men in Uniform, Civic and Associational Activity

PERSONAL NEWS

Spencer Love, president of Burlington Mills Corp. of Greensboro, N. C., has accepted chairmanship of the 1945 Empty Stocking Fund campaign in Greensboro.

William N. Chace has joined Burlington Mills Corp. of Greensboro, N. C., as assistant to William Klopman, senior vice-president. He assumed his new duties Nov. 1. In the fabric field Mr. Chace has served as sales manager of Lawton Mills and later was associated with Meyer & Marks Yarn Co. He recently was in charge of rayon staple fiber sales at American Viscose Corp.

George L. Root, left, has joined Reynolds Metals Co. as a development engineer on aluminum textile applications. He previously had been employed by American Magnesium Corp. and the Aluminum Co. of America. His headquarters will be at Reynolds' New York City office, 19 East 47th St.

S. Y. Austin is now chairman of the board of Southern Mills, Inc., Atlanta, Ga., with branch offices in New York City and Chicago. Mr. Austin retired as president of Avondale Mills July 1. He formerly was vice-president of Callaway Mills in Georgia. He started his cotton manufacturing activities with the Whittier Mills of Chattahoochee, Ga., about 50 years ago.

Odis E. Stevens, left, has resumed duties in the Carolinas as industrial V-belt sales representative for Dayton Rubber Mfg. Co. Mr. Stevens' headquarters has been transferred from Atlanta to Charlotte. He has been associated with Dayton for six years and is well known in the textile industry.

Dr. William A. Mosher, technical assistant to the director of research for Hercules Powder Co., has been named head of the University of Delaware chemistry department.

Frank Maconi has joined Graton & Knight Co. at Worcester, Mass., as merchandising manager. He will concentrate on developing markets for the company.

Ross M. Pfalzgraff has been appointed chief engineer for American Viscose Corp., with headquarters at Wilmington, Del. He succeeds Hobart O. Davidson, who died in September.

Victor H. Berman, left, president of Onyx Oil & Chemical Co. of Jersey City, N. J., received the honorary degree of Doctors of Laws recently from John Marshall College. The award was made to Mr. Berman because of his interest and efforts in New Jersey civic affairs.

G. E. McClellan, for the past four years manager of the E. I. du Pont de Nemours & Co. Spruance Rayon Plant at Richmond, Va., has been appointed director of production of the company's rayon division, succeeding Arlington Kunsman. A. B. Walmsley, Jr., manufacturing superintendent under Mr. McClellan, becomes manager of the Spruance Plant. . . . Robert L. Richards has succeeded Charles A. Cary as manager of the firm's nylon division. Mr. Cary is now assistant manager of the rayon division.

Dr. Simon Williams, director of research for the National Cotton Council of America, Memphis, Tenn., next month will become an associate director of research for Fabric Research Laboratories, Inc., at Boston, Mass.

Stephen C. Hale, chief engineer for Fulton Bag & Cotton Mills at Atlanta, Ga., has been nominated as vice-president for the Southern District of the National Society of Professional Engineers for 1946. He is president of the Georgia Society of Professional Engineers and a member of the American Society of Mechanical Engineers.

L. C. Plaehn, left, has been made Southeastern district manager for Barber-Colman Co., with temporary headquarters at Greenville, S. C. In his new post he will handle sales and service of the company's line of automatic controls, air distribution equipment and small motors. He has been with Barber-Colman since 1930, and has recently served as field engineer in the East.

G. W. Androne of Lancaster, Pa., has been named plant engineer of the Rock Hill (S. C.) Printing & Finishing Co., succeeding John A. Aycock, who resigned recently to accept a position at Kingsport, Tenn

WITH THE MILITARY — Lieut.-Col. George Asnip, in Army service three years, has rejoined La France Industries as general manager of its subsidiary Pendleton Mfg. Co., La France, S. C. . . . Capt. W. Chester Cobb, now discharged from the Army, has assumed duties as Southern sales manager at Charlotte for Arnold, Hoffman & Co. . . .

Lieut.-Col. James P. Kinard, Jr., left, now back in civilian life following service with the Army and War Production Board, has organized Kinard & Co., New York City selling house which will handle woolen and rayon piece goods produced by the manufacturing division of Marshall Field & Co. . . . Lieut. Charles Fickinger, until recently with the Army's Chemical Warfare Division, has rejoined the textile chemicals division of L. Sonneborn Sons, Inc., New York City. He will cover Georgia, Alabama and Mississippi, with headquarters at Chattanooga, Tenn. . . . Lieut.-Comdr. Philip C. Gossett, a veteran of three and one-half years in the Navy, has resumed duties as vice-president of Chadwick-Hoskins Co. at Charlotte as well as the Gossett Mills Co. plants in South Carolina. . . .

Capt. Harry Rogosin, left, has rejoined Beaunit Mills as vice-president in charge of all mill production following nearly four years of Army service, two of which were spent overseas. . . . Lieut. William Luenberg has been released from the Navy and has returned to duties as assistant head of the Textile Economics Bureau in New York City. . . . Lieut. Ralph H. McPherson has been released following 33 months of active duty with the Navy, including two years in the Pacific theatre, and has rejoined the industrial engineering firm of John A. McPherson Co. at Greenville, S. C. . . . Lieut.-Col. Leonard Smith, discharged after four years' Army service, has joined the National Cotton

—(Continued on Page 34)

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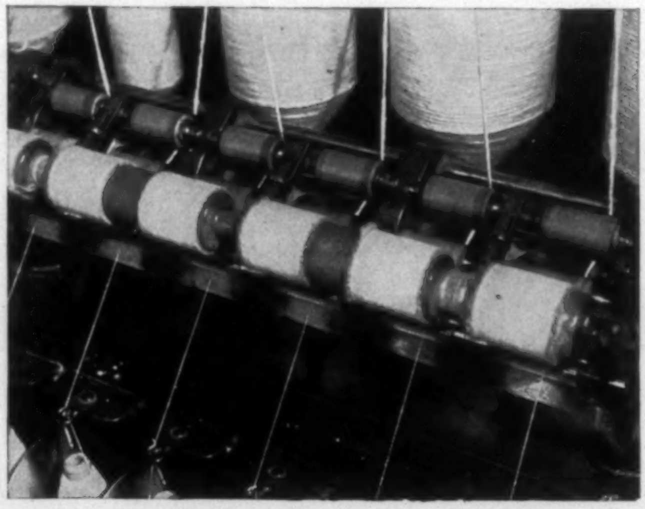

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Larger Research Staff

Dr. Frederick T. Peirce recently came to the school of textiles at North Carolina State College, Raleigh, as director of textile research, having resigned a similar position with the Shirley Institute of England where he had a staff of 56 persons and where he had been for 23 years.

During the few weeks Dr. Peirce has been in North Carolina he was able to impress upon the textile manufacturers the importance of research in the manufacture of new fabrics, especially those made with combed yarns, and at a called meeting of the board of directors of the North Carolina Textile Foundation, Inc., held at Greensboro recently, it was voted to furnish funds for the employment of a textile laboratory assistant and a physicist.

At the same meeting it was voted to furnish funds for the employment of a head for a department of synthetic fibers, who will rank as a full professor.

Unfortunately the program of expanded research in fabrics will be delayed for about three months by the absence of Dr. Peirce.

Prior to accepting the position of director of textile research with the school of textiles at North Carolina State College, he notified them that he had promised the government of Australia, which is his native country, to spend a few months checking the construction of their military fabrics and advising relative to the set-up of a textile research bureau in that country.

The Australian government arranged for his air transportation both ways and he expects to be back at Raleigh, and in his recently purchased home, early in January, 1946.

While Dr. Peirce is in Australia, Dean Malcolm E. Campbell is in Europe upon a special commission selected by our government to study textile education in Germany and nearby countries.

Elliot B. Grover, head of the yarn manufacturing department, will be acting dean during the absence of Dean Campbell. Mr. Grover has just returned from a three months visit to England and Germany, during which he was vice-chairman of a special commission sent by our War Department to acquire information about textile manufacturing machinery and processes in Germany.

The recent responsibilities which have been placed on Dean Campbell, Dr. Peirce and Professor Grover by the American and Australian governments is some indication of the calibre of the men who have been brought to the school of textiles at North Carolina State College with the assistance of the North Carolina Textile Foundation, Inc.

President Truman's Address

Organized labor took full advantage of the emergencies of the war to secure advances in wages and time-and-a-half for time over 40 hours and double time for holidays and Sundays.

Repeatedly they staged strikes which disrupted the production of vital war materials and threatened the security and the lives of those of our citizens who were in the Army and the Navy and were fighting vicious enemies.

Organized labor repeatedly took this country by the throat and said: "If you do not advance our wages we will not furnish the armed forces with weapons of war."

They said in effect: "To hell with the fighting men. Let them die if our demands are not granted."

Fighting a two-front war, we could not afford to allow the production of war materials to cease and time after time had to submit to wage advances and to labor doing less than a normal amount of work.

Manufacturers of war materials did make profits from their production, but excess profits taxes running as high as 90 per cent returned a large portion of war profits to the government and multi-millionaires were not made as was the case during World War I.

The public understood that the payment of high wages to labor was a reflection of the necessities of the war and that the payment of the overtime scale was for the war only.

While the public felt that labor had frequently been unfair in its demands, it acquired the impression that it was a wartime emergency situation and that there would be a downward adjustment when the pressure for the production of war goods no longer existed, or in other words, that with the end of the war there would be a return to a more normal and more reasonable basis but not a full return to pre-war wages or pre-war working conditions.

President Truman in an address recently took the position that labor should be allowed to retain all the advantages which it had obtained, during the war, by disrupting or threatening to disrupt the production of war materials. In fact, he advocated giving labor for 40 hours work as much as it had been receiving for 48 hours including time-and-a-half for the last eight hours.

At the same time President Truman said that industry, which had done a magnificent job in developing and producing war materials during the war, should not be allowed to advance its selling prices to compensate for paying time-and-a-half for eight hours which in the future would not be worked and would show no production.

He blandly asserted that now that the war emergency was over, labor should be allowed to reduce its working hours by eight but receive the same pay as when working 48 hours, and that industry should pay for the eight unworked hours without raising its prices.

President Truman advocated not only allowing labor to hold all advantages it had gained by unpatriotic moves during the war but to now receive time-and-a-half for eight hours not now to be worked and he called upon industry to pay the bill.

Franklin D. Roosevelt, as much as he was against industry, could have made no greater effort to give industry an unfair deal.

It must be that President Truman is looking through a telescope which is closely focused upon the next election.

Timing of Wage Increases

Most textile manufacturers have received a copy of the very able presentation which was made by President Claudius T. Murchison of the Cotton-Textile Institute in opposition to the wage rates under the proposed Fair Labor Standards Act.

We will not attempt to discuss the entire brief but it is well to place before the industry the record of textile wage increases during the war as outlined by Dr. Murchison. We quote:

The cotton textile industry was the first industry for which an industry committee was appointed under the Fair Labor Standards Act of 1938. After almost nine months of careful deliberation the committee recommended a minimum wage of 32½ cents, which became effective on Oct. 24, 1939. This rate was in force until June 30, 1941, when the minimum was raised to 37½ cents. That rate prevailed until April 30, 1942, when it was increased to 40 cents, the highest mandatory rate permitted under the act. In August, 1942, the War Labor Board ordered a 7½-cent increase for employees in 51 mills which became general for the industry. Late in 1942 cotton mills were given permission to raise the minimum 2½ cents to 50 cents, and in February, 1945, the board issued a directive providing, among other things, a minimum rate of 55 cents for employees in 48 mills. This rate was later made permissive for all other mills.

Compared with the increases provided for in this bill, the raises brought about by industry committee action under the Fair Labor Standards Act and the War Labor Board were small and the interval of time between increases relatively long. This comparison is shown in the following table:

FEDERAL MINIMUM WAGE ACTION IN COTTON TEXTILE INDUSTRY, OCT., 1939-1945, AND PROPOSED ACTION

Action		Increase over Previous rate		Duration
	Date	Cents	Pct.	(months)
A. Fair Labor Standards Act				
Wage order—32½c	Oct., 1939	2½c	7.7	20
Wage order—37½c	June, 1941	5 c	15.0	10
Wage order—40c	April, 1942	2½c	6.7	4
B. War Labor Board				
Directive—47½c	Aug., 1942	7½c	18.7	15
Directive—50c	Nov., 1943	2½c	5.2	15
Directive—55c (48 mills)	Feb., 1945	5 c	10.0	
C. Proposed Rates				
		15c	30.0	12 mos. or less
Statutory minimum—65c	1st year	10c	18.0	
Statutory minimum—70c	2nd year	5c	8.0	
Statutory minimum—75c	3rd year	5c	7.0	

The first wage order was only 2½ cents, or 7.7 per cent, above the then prevailing statutory minimum and the industry was given 20 months to absorb the increase before the rate was increased another five cents, or 15 per cent, to 37½ cents. This rate was permitted to remain unchanged by law for almost a year before it was again increased by 2½ cents, or 6.7 per cent, to 40 cents. Thus it required almost three years, two of which were abnormally active, to increase the legal minimum by 33 1/3 per cent under the Fair Labor Standards Act. Cents per hour increases granted by the War Labor Board are less than the rates proposed by this bill, and the last rate approved by the board, at the peak of wartime inflation, was from eight to 22 per cent less than those required for the first year of this law.

More significant than the gradualness of the wage changes since 1939 were the circumstances in which they were made. Throughout most of 1939 this industry was working its way out of the depression of 1938. In October, when the first wage order became effective, World War II was already two months old. The consequences of this event to this and all other industries need not be elaborated. For the first time since 1926 the industry had a market large enough to utilize its productive capacity and an appropriate price structure. Under these conditions it was not difficult to pay higher wage rates. Under these conditions wages would have increased without minimum wage legislation.

These conditions no longer exist. Indeed, they have not existed since the spring of 1943, when the industry began to experience a growing squeeze between rising costs and frozen ceilings. From that time on it was no longer possible to absorb increased costs and in the legislation extending the Emergency Price Control Act in 1944, Congress directed the Office of Price Administration to grant this industry price relief in order to maintain production and to assure the payment of parity price to cotton growers. Further price relief had to be granted this year to balance the higher labor costs which resulted from the last directive of the War Labor Board, issued in February of this year. The relief granted was in accordance with the usual OPA procedure, just sufficient to meet the minimum requirements of the law.

Higher prices and an unlimited market supported higher wage rates during the war. Do the underlying economic forces which this industry faces offer any assurance that they will do so in the future? The tremendous direct and indirect military demand, which accounted for about 50 per cent of the total requirements, have already been drastically reduced. The reconversion of the American industrial plant will again unleash the competitive forces between this industry and textile substitutes such as paper. Many of the expanded markets will shrink with the resumption of international trade, notably with the return of Indian jute and burlap. Hanging over the industry's international position is a dark cloud compounded of the reconversion of Britain's textile industry, the expansion of the textile industry in Latin America, and possible further reductions in textile duties under the recently extended Reciprocal Trade Agreements Act. Already handicapped with raw cotton costs that are more than four cents a pound higher than those of foreign spinners, and for which no protection exists in the present tariff law; with a wage differential already more than twice as high as our highest cost competitor, the enactment of this bill would shackle American cotton textiles in competition with imported textiles in the domestic market and, once the most pressing shortages are filled, remove them as an important factor in world exports.

New Goal; No Work

Decision of a textile manufacturing company in Wadesboro to give up its lease on the plant because it finds it impracticable to operate without workers, who struck, may be a drastic step but it's natural.

Operation may become so difficult these days that it reaches the impossible stage and there is nothing left to do but quit.

But the government, what will it do?

It can't go on and on forever if industry stops. Can't the boards and bureaus, the Congress and the Administration, all-wise and all powerful, do something? Apparently all these can't. We are afflicted with creeping paralysis, fast going into the galloping stage.

Of course, we would all finally work for the government. Perhaps that would not be a bad idea, especially so since President Truman has just called for a 20 per cent increase in pay for Federal employees. What a happy solution!

It would be except that the experts would find, when pay day came around, that there was nobody working to provide the wages, not even the old rate without the 20 per cent addition. What a pity it is that nobody has yet devised a scheme to live without working! That seems to be the goal.—*Charlotte Observer.*

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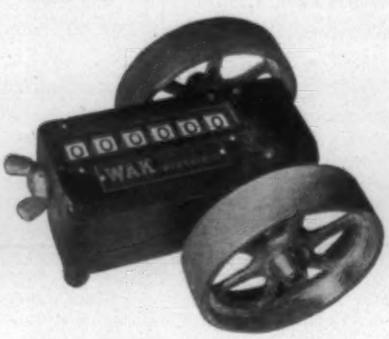

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PERSONAL NEWS

(Continued from Page 30)—
Council as director of its scientific research section. Prior to the war he was connected with the Textile Foundation at Washington. . . . Capt. James J. Marshal, left, has returned to civilian life as assistant to the executive vice-president of American Aniline Products, Inc., G. L. Armour, in New York City. . . . Brig-Gen. Norman Randolph, now retired after a lengthy Army career, has joined the industrial relations department of American Viscose Corp., where he will specialize in employing and finding suitable positions for the company's returning servicemen.

B. A. Ryberg, associate research director for the American Association of Textile Chemists and Colorists in the Lowell, Mass., laboratory, has resigned to become a research chemist for Proctor & Gamble Co. at Cincinnati, Ohio.

Robert McKowan of Ware Shoals, S. C., has succeeded J. T. Yates as general superintendent of Kerr Bleaching & Finishing Works, Inc., Concord, N. C. Mr. Yates, with the firm continuously for 37 years, has been given an indefinite leave of absence because of poor health.

C. F. Haysworth has been elected to the board of directors of the Brandon Corp., Greenville, S. C.

Fred C. Abbott has been appointed manager of the new products division of Pennsylvania Salt Mfg. Co., Philadelphia. His duties in this new division of the company's sales department will be to introduce and develop new industrial chemicals and specialties.

Dr. Victor E. Wellman will join the staff of the development department of Calco Chemical Division, American Cyanamid Co., Jan. 1, 1946. In addition to his development work, Dr. Wellman will serve as technical advisor to the sales department on matters relating to intermediates and chemicals. He is presently connected with R. W. Greeff & Co., Inc., of New York City and was for 15 years with B. F. Goodrich Co.

Elmer C. Bertolet has joined Laurel Soap Mfg. Co., Inc., at Philadelphia, as technical director. Until recently Mr. Bertolet was senior technologist for the Jeffersonville (Ind.) Quartermaster Depot's textile section, research and development branch. Prior to the war he was head of the Philadelphia Textile Institute's department of chemistry and dyeing.

Earl B. Morgan, formerly general manager of the Lees-Cochrane Co. plant at Glasgow, Va., has been appointed vice-president of the parent firm, James Lees & Sons Co. of Bridgeport, Pa. . . . James W. Dunaway has resigned as vice-president in charge of sales for Lees-Cochrane to enter the hotel furnishings business in Florida.

Mrs. Mildred Barnwell Andrews, formerly executive secretary of the Southern Combed Yarn Spinners Association, has been appointed to a special textile research assignment for the manufacturing division of Marshall Field & Co.

W. F. Christman has resigned as superintendent of the Marshall Field & Co. towel mill at Fieldale, Va., to become associated with Sunspun Mfg. Co. at Asheboro, N. C.

J. T. Thompson has resigned as overseer of spinning for the Oakland Plant of the Kendall Co. at Newberry, S. C.

Jack D. Towery, left, has been appointed to the textile engineering staff of the Institute of Textile Technology, Charlottesville, Va. From 1942 to until recently he was in charge of cotton spinning and weaving research projects at the University of Texas. He is a registered professional engineer and member of numerous textile organizations.

WITH THE GOVERNMENT — Maj. Herbert Rose has assumed duties as director of the Civilian Production Administration textiles bureau. He succeeds Kenneth W. Marriner, director of the textile, clothing and leather bureau under the War Production Board set-up, who has resumed duties with Winslow Bros. & Smith, wool mercantile firm at Boston, Mass. . . . George Maxwell has been appointed by the War Labor Board to investigate the textile labor situation in Southern states.

Fred Winecoff, left, for 13 years connected with the weaving department of Proximity Mfg. Co. at Greensboro, N. C., has joined the sales and service department of Atlanta Brush Co. He will travel in North Carolina and Virginia, working in conjunction with George B. Snow, a member of the Atlanta Brush Co. staff for the past 32 years.

Calco Bulletin Shows Use Of Microscope in Dyeing

The microscope has become an important tool for the study of problems in the field of dyeing. It aids in the interpretation of faults and so makes improvements possible in both processes of dyeing and in the properties of the final dyed product. The use of the microscope applies equally to other fields of color application. During the years that microscopy has been in use at the Calco Chemical Division, American Cyanamid Co., many techniques have been developed for the study of dyeing. In order that some of these may be used more widely, it was decided to make available to industry and research the results of many years' work in this field.

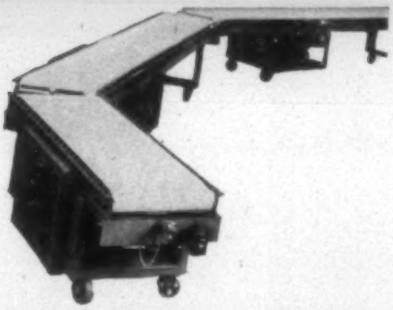
The Calco technical bulletin No. 770, entitled *Microscopical Techniques for the Study of Dyeing,* has been recently made available and bids fair to become a standard text book on this new field of industrial research. The text is supported by illustrations of the equipment now in use as well as views of the Calco laboratory. It also covers the various techniques in the preparation of microscopical cross-sections and the methods of color photomicrography. A copy of this bulletin may be obtained by addressing your request care Advertising Department, Calco Chemical Division, American Cyanamid Co., Bound Brook, N. J.

Walton Distributes His Book To WPB Division Employees

Frank L. Walton, vice-president of Catlin-Farish Co. and former director of the textile, clothing and leather division of WPB, is shown distributing copies of his new book, *Thread of Victory,* to the WPB employees who worked in the division where he was chief for two and a half years. Mr. Walton spent two full days at WPB autographing copies of the book for the textile, clothing and leather bureau workers as a memento of their war activity.

Island Equipment Co. Has New Conveyor Belt

To meet present-day needs for flexibility in conveying equipment, Island Equipment Corp. of New York City has placed on the market a small powered belt conveyor unit in three, five and ten-feet lengths. These units can be coupled to make as long a conveyor as desired. Due to their short lengths, they can be adapted to form any shape and will convey on the level, up or down grade, two sections making a 30-degree turn, three sections 60 degrees and four sections 90 degrees. Another feature of this equipment is complete control of the entire assembly of units by push button. Unit belts come in three different widths, 12, 16 and 20 inches. The units reportedly are capable of carrying a distributed load of 400 pounds.



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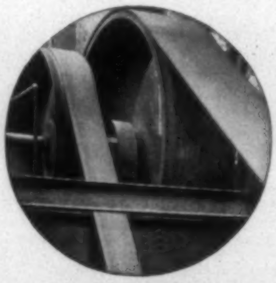
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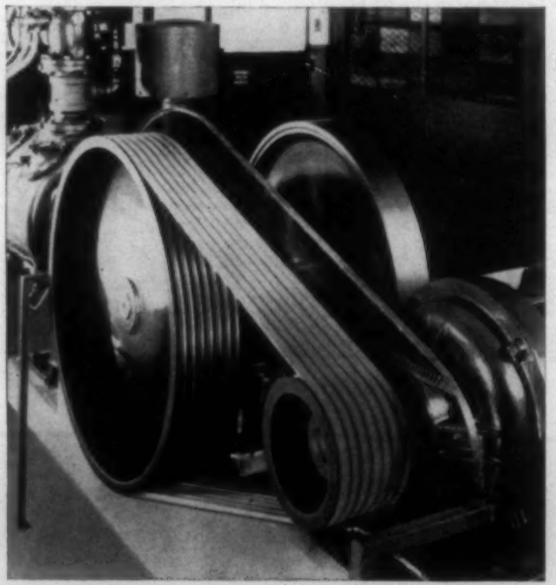

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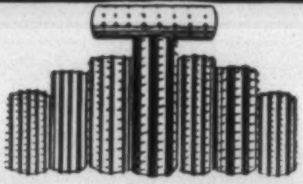

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WANTED—Position as overseer carding and spinning, either or both. Can superintend yarn mill. Experienced on carded, combed and blends. Now employed. Can furnish best of references. Address "Overseer Carding," care Textile Bulletin.

WANTED—Job as Master Machinist. Am now employed. Have had wide and varied experience; will consider good mill anywhere. Would rather get with mill making improvements and building. Address "J. O. H.," care Textile Bulletin.

MILL ENGINEERING—Registered Professional Engineer, formerly with Robert & Co., wants job making mill construction plans; fee or salary basis. Write "Box S-D," care Textile Bulletin.

POSITION WANTED as Superintendent of medium size mill or overseer of large weave room. Also experienced cotton classer. A-1 references. Address L. W. D., care Textile Bulletin.

WANTED—Position as Superintendent; 25 years' experience on sales yarns and woven fabrics, cotton; rayon, acetate and wool mixes and blends; in best of health; strictly sober; good references as to character, ability, etc. Reply to "Box 33," care Textile Bulletin.

OVERSEER WEAVING, several years' experience, desires to make a change. Prefer eastern or western section. Good education; sober; small family. Would consider job at once. Write "Weaver," care Textile Bulletin.

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POSITION WANTED — Twenty years experienced card room overseer desires job in some good mill. Prefer South. Can furnish references. Write "South," care Textile Bulletin.

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Non-Generator Tachometer Product of Metron Co.

Development of a portable hand tachometer, in which no gears or gear shifts are employed, has been announced by Metron Instrument Co. of Denver, Colo. This non-generator type of tachometer, designated as the Metron Type 25A, is claimed to be different

from any other tachometer in these respects. The tachometer head consists of a set of contacts operated by the rotating shaft. It has a low driving torque, according to the manufacturer, extreme stability and comes equipped with two discs allowing six-feet-per-minute ranges. It is also available in switchboard types.

Other claims advanced for this new product are that the tachometer cannot be damaged by overspeeding or changing range while making measurements; that it embraces a new principle of operation with one rotating part permanently lubricated in ball bearings; that no vibration reaches the indicator because the head is separated from it by an electric cable; and that its low driving torque does not slow down low-power devices. The head is connected to an electrical indicating unit by means of a flexible cable.

Yale Adds Lift Truck To Line of New Products

Newly added to the Yale line of materials handling machinery is the "Worksaver" electric truck. The Worksaver is intended to relieve its operator of all physical strain. Compact and easily controlled, it can be maneuvered in congested areas, along narrow passages, and around sharp corners without waste of time or effort.

The main frame of the Worksaver is of heavy formed bar and plate steel, arc-welded into a strong and durable unit chassis. A continuous channel

bumper reinforces the entire power unit assembly and battery compartment and provides great travel stability. The load elevating linkage is of patented Yale design, which affords maximum grade clearance.

The Worksaver is available in two types, platform (as shown) and pallet. The former is designed to handle single unit loads, consisting of a crate, bale, etc., or multi-unit loads on skids or in sckid bins up to 6,000 pounds; the latter to handle single or multi-unit loads which are "palletized," up to 4,000 pounds.

The Worksaver is illustrated and described in a new catalog which will be sent on request. Write Yale & Towne Mfg. Co., 4530 Tacony St., Philadelphia 24, Pa.

Merrill Puts On Market New Drum Opening Tool

Merrill Bros. of New York City has recently introduced and placed on the market the O'Brien drum opening tool,

which, according to description, is to the industrial field what the can opener is to the household kitchen. It is

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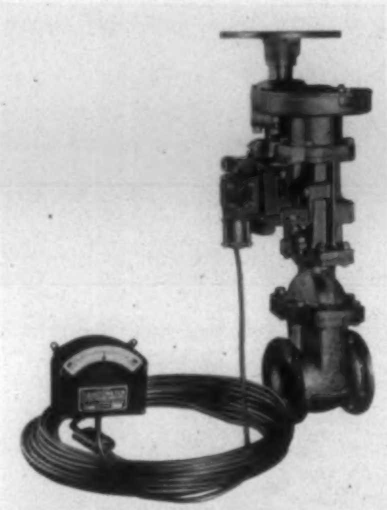
described as a simple but powerful and fast-cutting tool, operating on somewhat the same basic principle as the familiar can opener. It also is intended to prevent the danger of contents of drums, such as chemicals, corrosives, etc., from splashing and getting on the hands of operators. It is made of a steel drop forging, 23½ inches long, weighing 5½ pounds.

Position Indicator Is Now Available for Industry

A new remote-reading hydraulic valve stem position indicator, developed by the Liquidometer Corp. of Long Island City, N. Y., for the Navy to aid in controlling and isolating below-deck fires aboard carriers and other large warcraft, is now available for many industrial applications. These indicators show the open or shut position of valves which control the flow of fuel and other liquids, and are adaptable for many industrial applications where chemicals or other valuable, dangerous or inflammable liquids are used. Valve stem position is transmitted to the indicator dial through the Liquidometer temperature-compensated dual hydraulic transmission system, which requires no outside source of power. Thus it is designed to function in case of temporary failure in the plant's power supply. With this system, the indicator dial may be located at the transmitter or any reasonable distance from the valve. When used in industrial plants, all the indicators can be located on a single panel with the transmitters adjacent, making it possible for one operator to see and control the position of every valve.



New Representatives Named For E. H. Jacobs Co.

John C. Turner and William P. Russell, effective Oct. 1, assumed new duties as representatives of E. H. Jacobs Mfg. Co. of Danielson, Conn., and Charlotte in Georgia, Alabama and Tennessee. With offices in Atlanta, these service engineers will distribute the entire Jacobs line, including leather and canvas loom specialties, wood parts and plywood picker sticks. Mr. Turner will continue to manufacture and distribute W-Improved Spinning Saddles, as well as represent Sidebotham's Patented Spinning and Twister Tape, Kempton's Klenoil Bolsters, Textile Specialty Co.'s Spindle Base Vacuum Cleaner and Turner's Turntex Solvent. Mr Russell will continue to represent Lowell Shuttle Co.

The Wickwire Spencer Division of the Colorado Fuel and Iron Corp. has purchased the business and assets of the Coburn Trolley Track Co. of Holyoke, Mass. The steel company will immediately assume full control of all management, production and sales operations of Coburn.

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Southern Textile Association Fall Programs Are Announced

PROGRAMS for three divisional meetings of the Southern Textile Association which will be held during the next month have been announced by S. T. A. officials. Meanwhile, plans are going forward for the annual convention of the association, scheduled Dec. 8 at Charlotte. Operating executives of the South's textile mills will meet on that date in the Hotel Charlotte for a one-day, two-session convention. Technical addresses by recognized authorities in the textile industry will make up the morning session along with a short business meeting and election of new officers. The luncheon session will feature one address and entertainment furnished by the S. T. A. Associate Members Division. Convention activities will be concluded in time for all who may be interested to attend the Shrine North Carolina-South Carolina All-Star football game that afternoon.

Eastern Carolina Division

The S. T. A. Eastern Carolina Division program, according to Chairman V. E. McDowell, will offer a paper on the German textile industry by Elliot B. Grover, head of the yarn manufacturing department in the North Carolina State College school of textiles, who recently returned from Europe. This meeting will be held in the Erwin Cotton Mills Auditorium at Durham, N. C., Nov. 10, and begins at 9:45 a. m.

An open forum discussion of technical subjects is divided into five sections. On *opening and picking* the questions are: What is your present line of opening, blending and cleaning machinery?; specify the types of machines used and the order they appear in the line; give grade and staple of cotton used and pounds production per hour run through your layout. *Slashing:* What is your experience with automatic moisture controls for slashers.; give size formula, speeds, yarn numbers, etc.; Have you had any experience with separate motor drives for loom beams?; How do you determine the value of tests that are made on the slashers? *Weaving:* What has been your experience with the new type brace or spreader for Draper looms?; can you increase speed with this attachment?; can you save on supplies with it?; What other improvements have you made on looms? *Drawing:* What have you done on drawing frames to increase quality from the standpoint of cloudy web, variation of sliver inch per inch, etc.? Give (a) type of top roll; (b) percentage of draft between each roll; (c) speed of front roll; (d) roll settings and staple of cotton; (e) weight of lap or sliver; and (f) distribution of weight on top rolls. *Spinning:* Have you had any experience with the new type wooden sleeve spindle?; what saving have you made by use of this type spindle and paper bobbin?

Northern North Carolina-Virginia Division

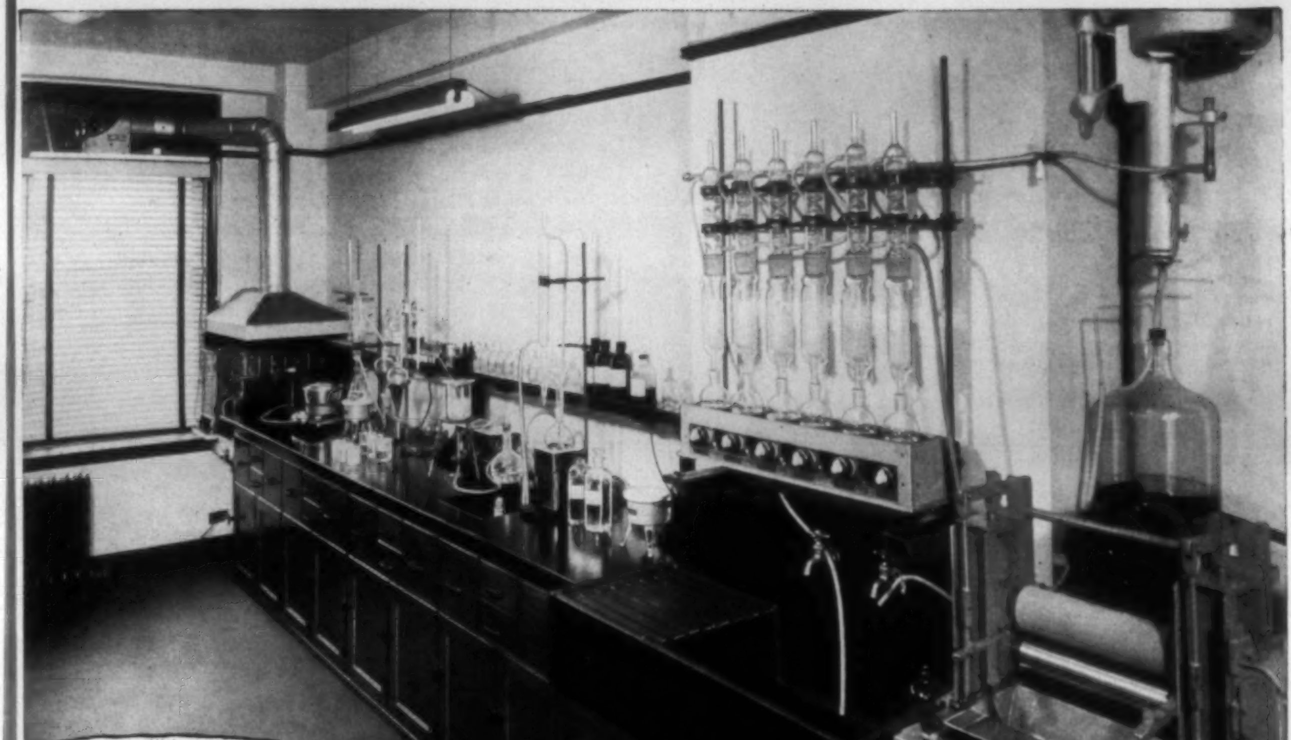
The fall meeting of the organization's Northern North Carolina-Virginia Division, set for Nov. 17 in the Y. M. C. A. Building, White Oak Mill community, Greensboro, N. C., will be directed by Smith Crow, chairman. Dr. John Redhead of the First Presbyterian Church at Greensboro will speak on "Human Relation Problems Confronting the Textile Industry." Carl Brandt of Whitin Machine Works will discuss "Textile Machinery Developments," and G. H. Dunlap of North Carolina State College will discuss textile research. The meeting will begin at 9:45 a. m.

South Carolina Division

John M. Caughman, chairman of the S. T. A. South Carolina Division, has announced details of his group's meeting which will be held at the Clemson College textile building beginning at 10 a. m. Discussion questions of interest to spinners are as follows: (1) Does the installation of the slow-motion drive on pickers with blending reserve box improve the lap? How?; (2) Is the use of what is known as the "aper tube type spindle" satisfactory? How does bolster wear compare with other type spindles?; (3) Is it practical to run 2½-inch staple rayon on a regular flat top card?; (4) What is the maximum length cut staple rayon that can be spun on regular three-roll long draft spinning? John M. Cook of the United States Department of Agriculture's cotton testing laboratory at Clemson will discuss the Shirley analyzer, Pressley test and fibrograph tests, and will demonstrate the operation of the Shirley analyzer. Weaving questions are: (1) What experience have you had with the motor-driven moisture-controlled slashers? What are the principal features and advantages?; (2) What in your opinion is the best cleaning procedure for a weave room running cotton goods?; What is the maximum length quill that can be run with 150 denier filament rayon filling? What is the maximum length for 300 denier?; (4) Have you had any experience with loom spreaders?

Georgia Textile Executives Meet Nov. 24

Slashing and weaving topics will be discussed at a meeting of the Textile Operating Executives of Georgia Nov. 24 at Georgia Tech, Atlanta, marking the resumption of meetings "in the flesh" which were cancelled during wartime. Sessions will begin on that date at 9:30 a. m. in the chemistry building of the college. The session will adjourn in time to give members an opportunity to attend the Georgia Tech-Clemson football game in the afternoon.



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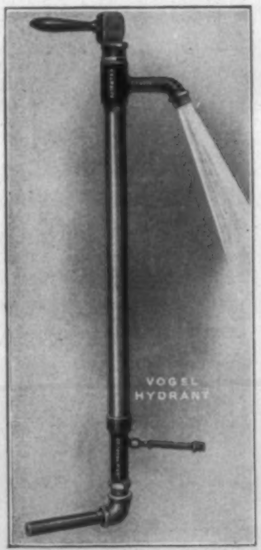

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Wilmington 99, Delaware

German Textile Developments

(Continued from Page 18) spinning of the rayon yarn was done on standard French worsted equipment. In the combing department the only new machinery of special interest was a backwash dryer, built in Chechoslovakia, which is especially suitable for dyed rayon silver and its capacity was claimed to be around 1,500 pounds per hour.

Because the rayon staple fiber is so uniform in length, most spinners reduced the drawing operation to four passages for the single 33s worsted yarn. They made full use of the gills equipped with rubber aprons as brought out by the Societe Alsaciennes de Constructions Mecaniques in Mulhouse (SAC) and by Hartmann in Chemnitz. The best machines of this type are probably the rubber intersectings of SAC. With the help of the rubber aprons the strength of the silver is considerably increased which in turn allows the drafting of much thinner silvers than with the customary intersectings which are equipped with the revolving funnels. The adoption of rubber intersecting frames is very valuable, providing an appreciable saving of labor and space and, therefore, decreasing the drawing costs.

The worsted spinners have nearly all changed over from mule spinning to ring spinning. The ring spinning frames were equipped with the high draft mechanism, similar to the Casablanca system. It enables them to use drafts as high as 20 on a rayon staple yarn, whereas on a wool yarn it is claimed that drafts up to 15 are possible. They generally are against the use of high spindle speeds and prefer the 2.2 inch rings. It is interesting to find that the spin-regulators built by Siemens & Schuchert were considered as of little value. The main objection was that it was too difficult to keep them in perfect working condition and the upkeep was costly.

The four woolen mills visited were found well equipped with the best and newest machinery of German make. Of the four steps necessary to produce woolen yarns, namely, mixing, oiling, carding and spinning, all mills combined the first two operations, and they placed special emphasis on proper blending with blower delivery. One mill has built the emulsion spray nozzles into the blower pipe which feeds the material to the fearnaught, whereas in another one the oil line is built into the turbo head and the emulsion sprays down with the falling stock.

Weaving is probably the manufacturing operation where the Germans have made the least progress. In warping they saved space by storing all warps vertically on 12 to 14 inch frames with the help of a chain arrangement. Of special interest was a high efficiency mechanical tieing-in machine. This machine knots up to 2,400 ends of the two-ply warp yarn of the standard uniform cloth in 12 minutes.

No extraordinary procedure or new types of finishing machinery were observed. The only process which is of importance is the water repellent treatment they had to give the standard Army cloth. With the increased amount of rayon staple fibers in the uniform cloth, the deficiency of these fibers in regard to their ease of wetting-out and their high water absorbency came into play. The *Wehrmacht* in 1941 started to make extensive studies to increase the hydrophobic properties of rayon. The main research was done by I. G. Farben with the result that they produced some excellent water repellent compounds, known as Persistols. From 1943 on the water repellent treatment was made compulsory for the standard uniform cloth. All the mills visited used in place of the Persistol, which was no longer available, wax emulsions combined with aluminum formate.

QMC Plans Co-ordinated Textile Research

Designed to further improve military textiles as well as civilian goods, an extensive program of continued research was outlined by Lieut.-Col. S. J. Kennedy at a conference of Army officials and textile men assembled in Washington Oct. 25 instigated by the Quartermaster General. Colonel Kennedy said that ten areas of research "must occupy the attention not only of the military services but of the industry itself if significant advance is to be made toward furnishing improvement in textiles." Colonel Kennedy is chief of the textile section, research and development branch of OQMG, under whose auspices the parley was conducted.

The ten-point program outlined consists of improvement of fabrics with respect to water resistance; improvement of military webbing; improvement of equipment for sleeping in the field; improvement of shelter in the field; shrink resistant treatment of wool items; improvement in abrasion resistance; treatment to resist tropical deterioration; improvement in seams; evaluation of new materials and processes for military use and other problems including protection against gas warfare.

Partly in answer to Colonel Kennedy's assertion that the solution of many of the textile problems which the Quartermaster Corps has yet to solve may lie outside the field of the textile industry itself, perhaps in the chemicals and synthetics industries, Lieut.-Gen. Edmund B. Gregory, Quartermaster General, pointed out that, while great progress has been made with synthetic fibers, there is still an important military place for the natural fibers.

Du Pont Plans New Office Building

Plans for a new 18-story office building addition to the Nemours Building in Wilmington, Del., have been announced by E. I. du Pont de Nemours & Co. Construction will begin next spring, and the building will be completed by the spring of 1947, entailing an expenditure of approximately $3,000,000. The building will be 230 feet in height and will occupy a net ground area of 15,600 square feet with fronts of 71 feet. It will be of modern steel construction with brick exterior and with interior walls and partitions of 20-gauge sheet steel. Tentative designs provide for the 18th floor to be enclosed with clear glass walls. Lighting will be of fluorescent type.

The results of the first in a new series of six post-war industrial surveys have been compiled for the post-war planning committee of the National Paper Box Manufacturers Association of Philadelphia, Pa., and published in a 24-page brochure entitled *Post-War Market, Sales and Industrial Progress Survey of the Textile Industries.* The text is annotated by graphs showing geographical plant centers and locations, post-war prospects and plans and results of polls taken on such questions as the 40-hour work week, removing of government restrictions, etc.

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In the months ahead when quality will be just as essential as quantity . . . there will be no place for "doubtful" spinning and twister frame cylinders . . . Cylinders that look all right but fail to give the vibrationless performance so essential to higher speeds and quality production.

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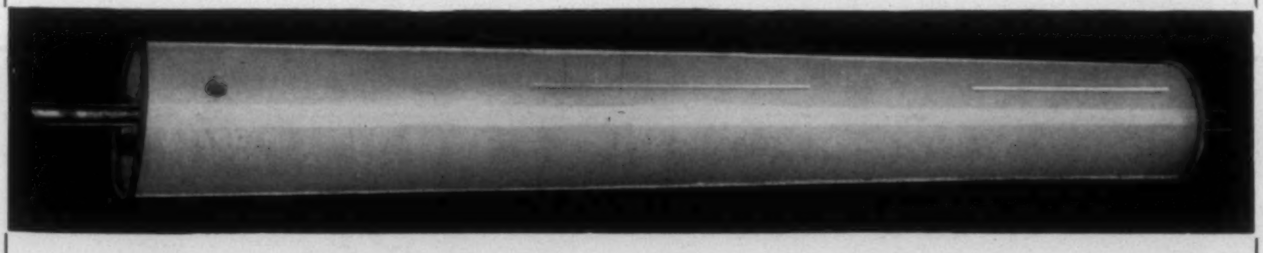
The Dynamic Balancer, developed and used exclusively by Jenkins, removes all doubt. After the cylinder has been statically balanced, it is then given an actual running balance on the Dynamic Balancer up to 2000 RPM. By this method, every point of unbalance is accurately recorded, and the cylinder can be balanced perfectly throughout its entire length.

Perhaps these cylinders can help you produce more yarn and better yarn. Your inquiries are invited.



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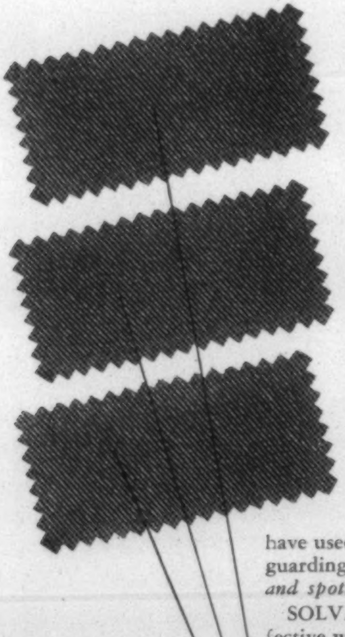

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Jap Threat In Rayon Output Ended

Japan's pre-war threat to the world as a producer of rayon yarns and fabrics is ended for some years, if not forever, it was learned by Harry Riemer, war supply correspondent, in an exclusive interview with Iwajiro Noda, president of the Japan Cotton & Silk Trading Co. Although Japan had become an important factor, particularly in staple fiber, Noda told Riemer, now it has neither pulp nor chemicals. The former heretofore had come from Finland, Sweden and America. Noda doubted Japan's ability to return to prominence in the synthetics field, quoting figures of 380,000 looms weaving silk and rayon before the war which has dropped to about 100,000 now. The silk industry is considered in better condition than most others. Noda estimated that Japan could produce 250,000 bales or raw silk if she could import food and not have to divert more acreage from mulberry fields for foodstuffs, such as wheat, oats, etc., decreasing cocoon production by two-thirds compared with pre-war levels. The weaving capacity is less bomb-damaged than that of cotton, Riemer cabled. "The basis for starting up reeling is readily available," he quoted Noda, "if we can export. Yokahama and Kobe will again be the big silk markets."

N. C. Safety Contest Winners Listed

More than six and a quarter million man hours were worked without a single disabling injury in the tenth annual Statewide Textile Safety Contest, according to a report just issued by E. G. Padgett, director of safety for the North Carolina Industrial Commission, Raleigh. The commission and the North Carolina Cotton Manufacturers Association co-sponsor this annual safety event. "We are pleased to note that the accident frequency rate made during 1945 was the lowest since 1941," Mr. Padgett's report said. "The rate this year was 14.36, as compared with 15.50 in 1944 and 16.40 in 1943."

This year's contest was the largest of any previous ones. A total of 425 mills participated, and with the exception of one, every mill entering completed the entire contest period. Forty-seven mills, working 6,370,635 hours, completed the contest without a disabling injury. This is 11.1 per cent of the total and is the best record made since 1941. That this statewide safety event has had an exceptionally fine growth is shown by the fact that when it was started in 1936, 198 mills representing 59,977 employees working 33,187,487 hours were registered. This year, 425 mills employing 139,525 employees working 194,179,762 hours participated.

The safety contest runs for a period of 34 weeks each year, beginning with the first full payroll week in January and completing with the last full payroll week in August. Participating units are divided into groups, according to the average number of employees. For the first time, it was necessary to use seven groups this year. The mill in each

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group having the best record receives a trophy award from the North Carolina Cotton Manufacturers Association, and each mill completing the contest without a disabling injury receives the association's "Certificate of Merit" showing this accomplishment.

Group winners in the 1945 contest were as follows: Group 1, Peck Mfg. Co., Warrenton; Group 2, Adrian Mill, American Yarn & Processing Co., Mount Holly; Group 3, Mayfair Mills, Burlington Mills Corp., Burlington; Group 4, Ossipee Weaving Co., Burlington Mills Corp., Burlington; Group 5, Cleveland Cloth Mills, Shelby; Group 6, Stonecutter Mills Co., Spindale; Group 7, Firestone Textiles Corp., Gastonia.

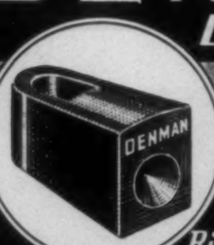
In addition to the annual awards, a special "Governor's Textile Safety Award" is presented the mill completing five consecutive contests as a trophy or certificate winner. The Ossipee Weaving Co. of Burlington completed five consecutive years with the 1945 contest, and is now eligible for this special recognition. In the past this award has been won by the Roxboro Plant of the Roxboro Cotton Mills, Roxboro; Finishing Mill of the Grove Thread Co., Gastonia; Indera Mills, Winston-Salem; Sayles Biltmore Bleacheries, Biltmore, and the Morowebb Cotton Mills of Gastonia.

Rayon Cord Tires Being Promoted

Close on the heels of one leading tire manufacturer's announcement on its use of rayon cord passenger tires, Industrial Rayon Corp. has launched an educational campaign in 100 newspapers coast to coast on the advantages of rayon cord tires. They point out that this application of war-proven tire fabric to passenger cars is an advance comparable with the introduction of pneumatic tires, demountable rims and balloon tires. The basic reasons for superiority of rayon tires will be explained in the simplest terms through this campaign. Its sponsor has attained leadership in this field by application of its continuous process to tire yarn manufacture and by the complete integration of tire yarn, cord and fabric production in its plants.

The sales offices of the Standard-Coosa-Thatcher Co. of Chattanooga, Tenn., manufacturers of mercerized cotton yarns and threads, have been moved from the Lafayette Bldg. at Fifth and Chestnut Streets, Philadelphia, to new and enlarged quarters at 1232 Fidelity-Philadelphia Trust Bldg., 123 South Broad St., Philadelphia 9.

DENMAN
LOOM PARTS



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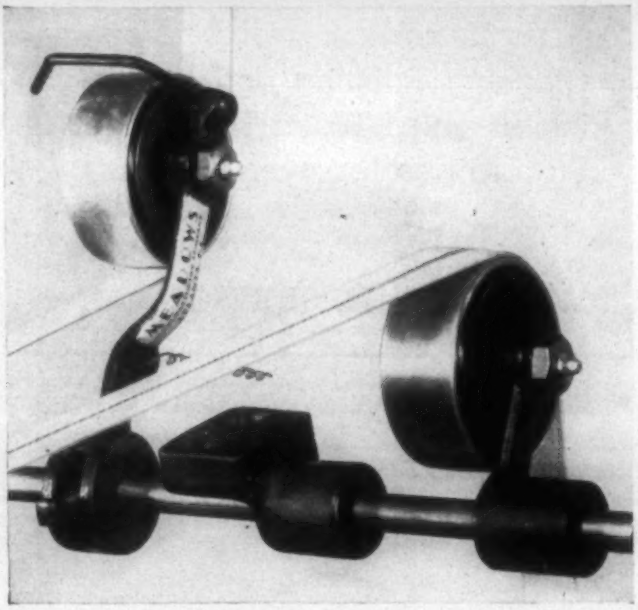

Tension Pulley (B-219-3) | Pad (B-219-1) | Idler Pulley (B-219-2)

Pulleys are machined aluminum, equipped with Fafnir ball-bearings, 3″ in diameter with 1¼″ face. For information and prices consult one of our representatives, or write us.

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Veterans Textile Guidance Agency Proposed

A plan to establish a central textile guidance agency for veterans, intended to include all sections of the New York fabric markets and not interfere with any plans or group movements now under way, was approved at a recent meeting of the Arkwright Club of New York City. The agency would consolidate activities not now sponsored by private firms or associations. The agency will be governed by a board representative of a cross-section of the cotton, rayon and woolen textile industries and enlistment of financial support of these branches of the textile industry will be sought. George Estes of Estes-Schlichter-Macfarlane was elected secretary pro tem of the agency planning committee to work with Harry Riemer, president of the Textile Square Club, in securing the support of textile associations.

Twitchell Announces Yarn Price Reductions

For the second time this year, E. W. Twitchell, Inc., manufacturer of Textilene, has cut the price of stuffer warp yarn, Axminster filling yarn, and ribbon filling yarn, in all standard grades and colors, by two cents per pound. This latest price reduction brings the per-pound cost of these three items down to 18 cents for the stuffer, 21 cents for the Axminster, and 16 cents for the ribbon. Despite the fact that the quality of Textilene is being constantly improved, according to the manufacturer, the latest price reductions were made possible because of increased volume and improved manufacturing methods. While current demand is running somewhat ahead of production, it is expected that the installation of new machinery will soon make it possible for Twitchell to supply all the Textilene that manufacturers require.

N.A.M. Plans Golden Anniversary Congress

The 50th annual meeting of the National Association of Manufacturers, touted as the Golden Anniversary Congress of American Industry, will be held Dec. 5-7 in New York City. Dedicated to the achievement of industrial peace, maximum production and good jobs at good wages for the nation's workers, Ira Mosher, president of N.A.M., has pointed out that the meeting will be the first major gathering of top management since termination of the war. Because of the timeliness of the meeting, following upon President Truman's labor-management conference, industry will be able to give high speed consideration to any constructive program or measures originating in the Washington discussions, said Mr. Mosher.

German Chemical and Dye Trust Seized

Allied confiscation of the I. G. Farbenindustrie A. G., German chemical and dye trust with large rayon interests, was ordered by the four-power Control Council Oct. 12. It directed that some 300 of its plants and its vast financial assets be seized immediately. Properties and funds of I. G. Farben will be taken over as reparations or for such disposition as the Allies see fit. Owners and stockholders of I. G. Farben will receive no future profits from those plants still operating and there will be no compensation for the seizure. Approximately three-fourths of the Farben German factories are reported intact, 40 of which are in the U. S. occupation zone and 50 to 60 Farben plants in the Russian zone.

New Textile Trade Association Is Formed

The committee formed to create a trade association for the upholstery and drapery fabric manufacturers has announced that such an organization is now forthcoming. Leading executives of the trade met at the Vanderbilt Hotel in New York Oct. 23, and formally ushered in a new trade association to be known as the Upholstery and Drapery Fabric Manufacturers Association. The association membership embraces manufacturers of all types of upholstery and drapery fabrics with mills located in various sections of the country. A temporary board of directors and officers were elected to serve until the first annual meeting which will be held in New York the early part of December.

One of the first moves of the association will be to secure permanent offices in New York and to appoint a paid executive who will devote his entire time to the affairs of the association. The accounting firm of Arthur H. Morton & Co. will handle the financial affairs of the association until a permanent staff has been appointed.

Directors are Albert J. Bartson, Albert J. Bartson, Inc.; Harold W. Burton, Moss Rose Mfg. Co.; H. E. Carls, Neisler Mills, Inc.; Melvin H. Deutsch, Cohn-Hall-Marx Co.; P. W. Fowler, Blackstone Plush Mills, Inc.; V. T. Harper, Sidney Blumenthal & Co., Inc.; Allen S. Hatcher, Northampton Textile Co.; R. C. Hinchman, Mercer Textile Co.; Joseph A. Kaufman, Kaufman Plush Co.; Robert E. Nicholson, La France Industries; R. H. Rabbitt, Jordan Mills, Inc.; M. H. Stern, Albemarle Weaving Co.; H. A. Sobel, Quaker Pile Fabric Corp.; William C. Torkington, Southern Pile Fabric Co., Inc.; and Jud E. Williams, Goodall Fabrics, Inc. Mr. Nicholson was elected chairman of the association and Mr. Hinchman secretary.

A Handbook On Catalytic Chemistry

In writing *Catalytic Chemistry* the author, Henry William Lohse, Ph.D., F.C.I.C., consulting chemist, has "aimed at a brief factual presentation of the underlying principles of catalytic phenomena and the application of catalytic reactions in industrial processing." Further, by way of preface, he says, "In many cases, no attempt has been made to modify the original author's view, although such a presentation may lack cohesion. This is meant to reflect the multiplicity of experience and also the variance in conceptions which exist in catalytic chemistry up to this time."

Particular attention has been paid to the presence of impurities in catalytic reaction systems and to the role of traces of other metals in silver, copper, iron, nickel, etc., used as catalysts. A separate section has been devoted to each of the various types of catalytic reactions. The nature and properties of catalysts, specific types of catalytic reactions, as well as industrial catalytic reactions, have been discussed in detail. Many illustrations, consisting of photographs, drawings, graphs and tables, complement the text and make for clarification of little understood phenomena described.

Catalytic Chemistry is published by the Chemical Publishing Co., Inc., Brooklyn, N. Y.

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Cotton Goods Market

The War Production Board has announced that it has initiated a compliance investigation of the reported withholding of textiles from the market by textile mills or converters during the fourth quarter of 1945. It is reported, says WPB, that some textile producers and converters are failing to move their entire production immediately into trade channels.

Supplies of textiles are still far below total demand, WPB said, and replenishment of the serious deficiency in civilian supplies is a matter of prime urgency.

WPB Priorities Regulation No. 32 prohibits the fabrication of material which results in an inventory of the finished product exceeding the minimum working level. Withholding of supplies from the market, therefore, may involve a violation of the regulation.

Bankhead Amendment price increases for five cotton textile items, most of them industrial and surgical materials, have been announced by the Office of Price Administration.

This is the fourth group of cotton goods to receive higher prices under the textile pricing standard of the Bankhead Amendment to the Stabilization Extension Act of 1944. Most of the revised prices required under this amendment are issued in two bands. There is a higher band for mills paying wage increases ordered by the War Labor Board, and a lower band for mills not paying the higher wages but subject to other cost increases.

The price increases, effective Oct. 24, are for blanket linings, ducks, bulk surgical dressings made of bleached gauze, wide laundry cover cloths and cotton rope and twine.

Selling in the New York gray goods market remains dormant, with most houses sold up through November and unwilling to proceed further for the present. Though a few houses are reported to have contracted for some output to the end of the year, market observers believe it will be somewhere about Nov. 10 before the majority will release their December goods. Meanwhile, selling house men continue to regard the mill production situation with growing concern. It is generally agreed in Worth Street that unless output increases considerably within the very near future, which few expect, the effect will begin to be felt soon in the gray cloth market.

With further wage increases in mills regarded as inevitable by the majority of Worth Street quarters, OPA will have to take prompt action in granting another price revision once the higher labor costs are fact, in order to prevent some Southern mills from closing down.

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Cotton Yarns Market

Few encouraging factors have appeared in the Philadelphia sale yarn market recently which would indicate an improvement in the supply situation.

Some improvement has been noted, of course, in the coarse counts from spinners, and much interest is being shown in the contractor-termination inventory sales.

Selling, in the main, continues to be limited to five or six weeks.

Several yarn distributors express dissatisfaction with OPA because this agency is standing by doing nothing in regard to the 65-cent minimum wage demands of mill workers. Distributors explain that former defense workers are not returning to their jobs in the Southern spinning plants because present wages are far below what they earned while in war work.

These sources point out that OPA should step into the picture and work out a price scheme whereby mills will be able to meet the workers' demands and at the same time receive a fair mark-up. The shortage of yarns, market men state, will continue acute until some solution is formulated.

A total of 23,789,718 cotton spinning spindles were in place in the United States on Sept. 30, 1945, of which 21,911,746 were operated at some time during the month, according to figures released by the Bureau of the Census. This compares with 22,170,180 in August; 22,030,280 in July; 22,188,330 in June; 22,167,678 in May, and 22,279,910 in September, 1944.

The aggregate number of active spindle hours reported for the month was 8,370,814,079, an average of 352 per spindle in place, compared with 8,792,784,268; an average of 370 per spindle in place, for the month, and 9,380,597,374 an average of 404 per spindle in place, for September, 1944.

Based on an activity of 80 hours per week, cotton spindles in the United States were operated during September, 1945, at 111.8 per cent capacity. The per cent, on the same activity basis, was 100.5 for August, 102.0 for July, 118.8 for June, 114.8 for May, and 122.3 for September, 1944.

Another government report shows that of the 6,085,953 spindles in place June 30 in the United States and assigned to the production of sale yarn and yarn for own use other than weaving yarns, 95 per cent were active on the first shift, 82 per cent on the second shift, and 39 per cent on the third shift.

The total of 7,337 million spindle hours operated during the second quarter of 1945 is 3.5 per cent lower than the 7,605 million reported for the first quarter of this year.

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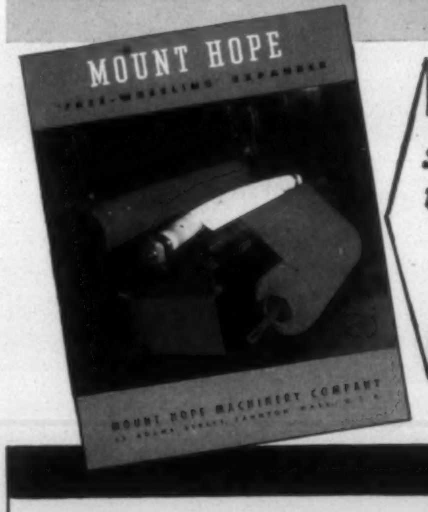

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Functions of CPA, WPB Successor, Outlined

Following the announcement by President Truman of his acceptance of the resignation of J. A. Krug, chairman of the War Production Board, effective Nov. 3, and of the dissolution of WPB on that date, J. D. Small, newly named administrator of the Civilian Production Administration, which will succeed WPB, recently outlined in detail the functions of the new agency.

"The War Production Board's task of production for war has been completed and WPB's record of accomplishment during the war years speaks for itself," Mr. Small said. "The Civilian Production Administration will take over, and will carry forward, those remaining WPB functions and controls that are required during the transition period of reconversion to accomplish the objectives laid down by the applicable Federal statutes and executive orders of the President, including particularly the War Mobilization and Reconversion Act of 1944 and the recent executive order of the President outlining the policies to be followed in the transition from war to peace. The functions transferred to the new office will be utilized to further a swift orderly transition from wartime production to a maximum peacetime production in industry free from wartime government controls with due regard for the stability of prices and costs.

"It will use its authorized powers to expand the production of materials which are, in short, supply; limit the use of materials which are still scarce; restrict the accumulation of inventories so as to avoid speculation, hoarding, and unbalanced distribution which would curtail total production; grant priority assistance to break bottlenecks which would impede the reconversion process; facilitate the fulfillment of relief and other essential export programs, and allocate scarce materials or facilities necessary for the production of low priced items essential to the continued success of the stabilization program."

The executive order creating the Civilian Production Administration as a separate agency carrying out the policies of the director of War Mobilization and Reconversion, transfers to it on Nov. 3 all the still remaining functions, powers, personnel, records, etc., of the War Production Board. Any outstanding WPB regulations, directives, orders, or delegations of authority remain in full force and effect as instruments of Civilian Production Administration, until revoked or amended by that office.

Outlining the organizational structure of the new office, Mr. Small said that it would be much smaller and more compact than the giant WPB structure that was needed during the war years. There will be five main bureaus handling, respectively, industrial operations, priorities, field operations, international supply, and the orderly demobilization of former WPB functions that will now either be closed out or, in some cases, transferred to other agencies. The functions of the five bureaus operating under Civilian Production Administration are generally planned to be as follows:

(1) Industrial Reconversion Operations. This bureau will deal with problems affecting particular industries which produce or consume scarce raw materials and products such as rubber, forest products, tin, lead and some other minerals, some construction materials, a few textile items and chemicals, and various hard goods and equipment items.

(2) Reconversion Priorities. This bureau will be responsible for the modification of general priorities and alloca-

tion controls (as distinct from the problems of particular industries), the internal clearance of agency actions, appeals, inventory problems, compliance, and relationships with other government agencies.

(3) Field Operations, concerned with operations in the field, including compliance.

(4) International Supply, concerned chiefly with imports, exports and international allocations.

(5) Demobilization, covering functional demobilization and transfers, budget, personnel, administrative services, and records.

A.A.T.C.C. Groups Hold Technical Sessions

Emulsion and their applications to textiles were discussed by Prof. Harvey A. Neville of Lehigh University at a meeting Oct. 19 of the Philadelphia section of the American Association of Textile Chemists and Colorists. Defining the term "emulsion," Professor Neville said that "an emulsion is a dispersion of one liquid as fine droplets in another liquid medium. Liquids of related chemical character are generally miscible—that is, form true solutions. Water, the most common liquid, is usually, though not necessarily, one of the pair; the other contrasting member of the pair is described by the term "oil," meaning a liquid immiscible with water. It is immediately apparent that from a given pair of liquids two different kinds of emulsions can be prepared, commonly referred to as the oil-in-water type and the water-in-oil type." He also treated of the advantages of emulsions, economy of materials, control of desired effect, modification of properties, effects of oil-water interface and wider use of emulsions.

"In the textile field," he said," it would appear that the use of emulsions would be particularly appropriate and logical in view of the many wet operations which are performed and the common characteristics which all textile fibers, filaments and fabrics have—namely, a hige ratio of surface to volume or weight. Whenever it is desired to add an oil, wax, or resin to a textile material or to remvoe such substances from a fibrous structure, the possibilities of emulsions or emulsification should be given thorough consideration."

Factors controlling levelness in vat dyeing were outlined by O. W. Clark of Calco Chemical Division, American Cyanamid Co., at a meeting of the Rhode Island section of the A.A.T.C.C. in Providence. The speaker predicted that vat dyes will be more extensively used and that many dyers with little previous experience in them will have to master their properties and many who have concentrated on the O. D. shades will have to refresh their knowledge of the full range of vat dyes.

Due to the fact that vat dyes exhaust rapidly and are not conducive to level dyeing, Mr. Clark advanced factors involved in level dyeing, such as the degree of final exhaust; the rate of diffusion of the dye within the fiber and in and out of the fiber; temperature manipulation to provide a means of modifying the dyeing behavior of vat dyes; and the judicious use of leveling assistants.

Dr. Raymond B. Seymour, director of the Industrial Research Institute of the University of Chattanooga, Chattanooga, Tenn., will discuss "Facts and Fiction on Fibers and Finishes" at the fall meeting of the South Central section of the A.A.T.C.C. in Chattanooga Nov. 10.

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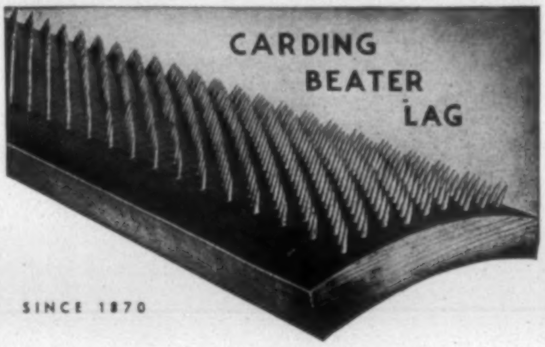

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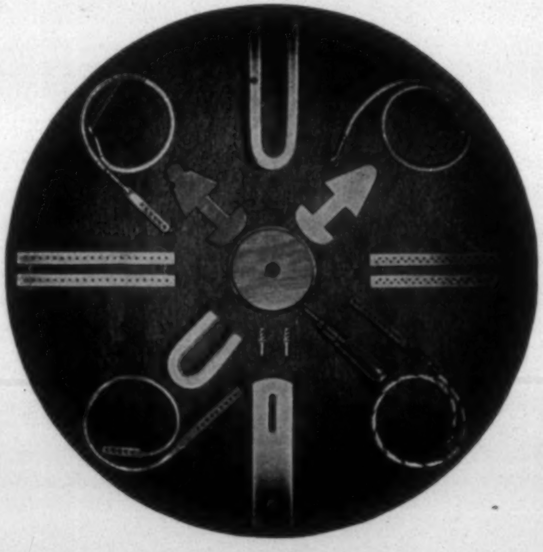

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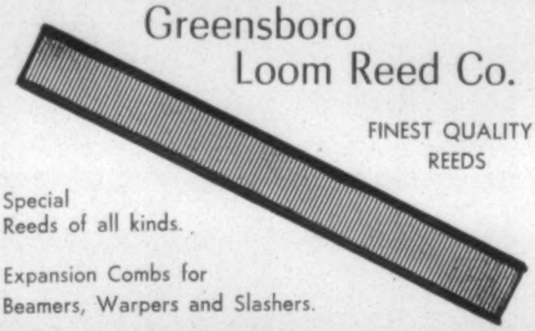

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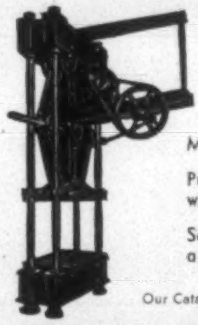

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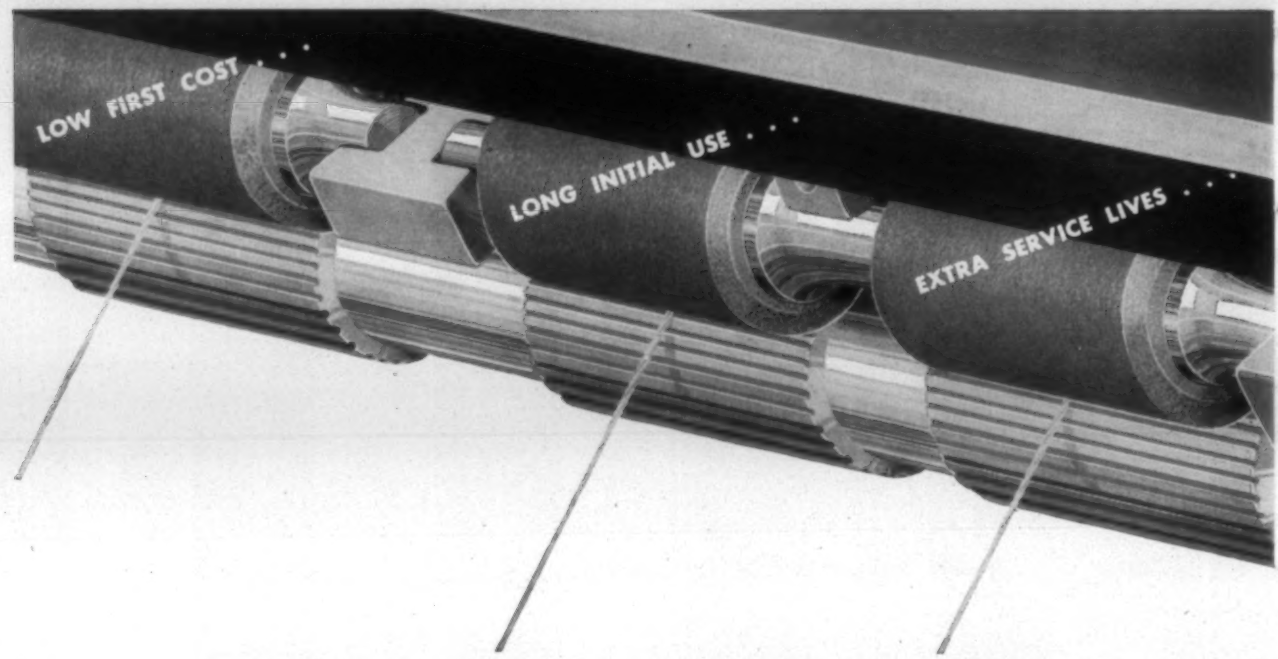

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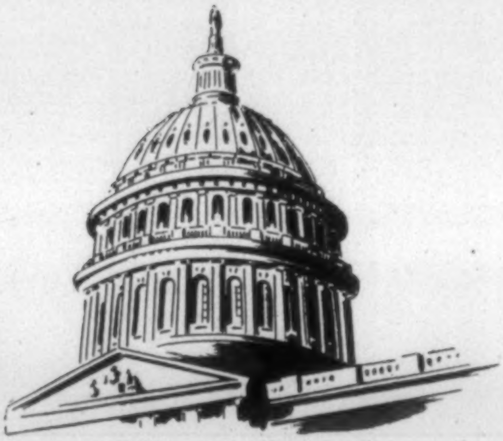

[Exclusive and Timely News from the Nation's Capital]

ONE SERIOUS QUESTION BEGINNING TO WORRY ADMINISTRATION LEADERS is: How much of a tax load can be superimposed on production-per-unit before price resistance sets in, and seams are opened in the fabric of consumption which will allow foreign goods not carrying this load to enter in volume and become competitive with home products? The question is not academic; rising production in other countries is pushing it to front.

Hard headed business men in Truman Administration, of which there are several capable and able, are looking economic facts straight in the face and urging more aggressive policy action on reconversion, which is lagging. They urge more assurance of stability, translated into jobs, and removal of needless restrictions, and counsel for declaration against more deficit spending or government-patterned production.

Full employment is a necessity, the President's advisers know, and there's no easy road to it. Government, they feel can create economic climate, but cannot create full employment-production except through utmost encouragement of private industry and free competitive enterprise.

Full Employment bill is a long distance from approval and passage, with many a high hurdle ahead. Labor's vociferous demands for early enactment are softening under blasting blows of economists and business men who point to dangers inherent in continued deficit spending, government entry into private business, and incalculable costs to taxpayers in financing experiments in the 60,000,000 made-jobs philosophy.

The 65-75 cent minimum wage bill, raising present 40 cent "floor," will be reported out of labor committees of the House and Senate. Senate passage is doubtful. House rules committee is expected to pigeonhole it, and heavy majority of House appears to be in opposition. Realizing the House hostility, wedged around the farm bloc, the unions are easing up in pressure for passage. Conservative estimate of economists is the enactment of measure would saddle $15 billion annually in additional production costs on nation's industry, but other estimates, including lateral increases, put sum of increase of $20 billion a year.

Interim tax bill, carrying estimated aggregate cut of $5,920 million, cuts more than was planned, and clears way for speedy readjustment. Reductions made for corporations are as great as can be expected for a long time; next year's tax bill will give breaks to individuals, not to business. This bill helps production picture; the next bill will be focused on consumption picture.

Consideration of next year's tax bill, slashing individual income, excise and other levies, and revamping whole revenue structure, is already under way. Hope is for enactment by mid-1946, because of approaching election. This law will govern the nation's economy for probably a half century. It will be geared to long-pull liquidation of national debt, and promoting tax-producing business and industry.

Tax recommendations will be asked of business men and industrialists by tax committees of Congress. Business men can, and should sit down now and begin framing recommendations for changes and revisions affecting their businesses. Hearings of each committee will run two to three months, and utmost latitude given to present views. Committees have in mind fair, equitable and non-burdensome adjustment all along the line. Business men will be urged to speak their minds, and make constructive suggestions.

Next three weeks will see the strike situation receding, says U. S. Conciliation Service. This may be wishful hoping or it may be right, because the incentive of big war contractors to surrender to higher wage demands, and pay excess profits to employees that are otherwise destined to the Treasury is removed with passage of the interim tax bill.

Many rank-and-file wage earners already seem more concerned over retention of the old job at the old wage than in forays for higher pay and less work. Returning veterans are beginning to cut sharply into job situation, and exercising statutory rights to return to old jobs. It's all beginning to have a sobering effect.

Cotton prices are moving steadily on new high ground, one factor being rumor that Congress may act favorably on pending legislation to include labor costs in calculating parity prices. This bill may pass House, but stands little or no chance in Senate. Prices are really jumping because of prospect of short crop with much low-grade cotton, coupled with larger export prospects and increase in domestic mill activity. Any legislation, other than taxes, that will react on cotton does not appear in prospect now.

All of the higher cost-producing proposals-----48 hours' pay for 40 hours' work, or 12 1/2 per cent increase; 65 cent minimum wage "floor;" "full employment" by deficit spending, and $25-a-week-for-26-weeks idleness---are being thrown at consumers markets stripped by war shortages. As shelves fill up, goods become plentiful, spiraling prices turn downward, or there's an impact of foreign goods, these demands are expected to fall like nine-pins and match stick houses crashing. They are a phenomenon of the day; the effervescence of inflation, as one official spokesman said.

New Dealers and "party line" adherents continue to try to use the taxing power to lash employers who resist post-war dictation or labor exactions. "Congress should amend the tax law," Montana's New Deal Senator Murray rose in the Senate to say, "to provide that any corporation which refuses to bargain collectively in good faith is not entitled to carry-back and carry-forward tax provisions for the year in which the refusal occurs." He said government sanctions should be laid against corporations failing to maintain take-home pay, and OPA should be directed to reduce prices to offset any decrease in average hourly wages resulting from elimination of over-time wages or downgrading of employees. The crack-pots continue vociferous, but with weakening voice and fading heyday.

White House is caught between arguments of two groups of advisers on continuance of rigid price ceiling formula. Bowles of OPA, Vinson of Treasury, and Reconversion Director Snyder urge rigid ceilings, raised only in "hardship" cases, and see inflation in the offing. Labor Secretary Schwellenbach, Commerce Secretary Wallace, and New Deal rank-and-filers want ceilings raised to allow costs of wage increases to be absorbed.

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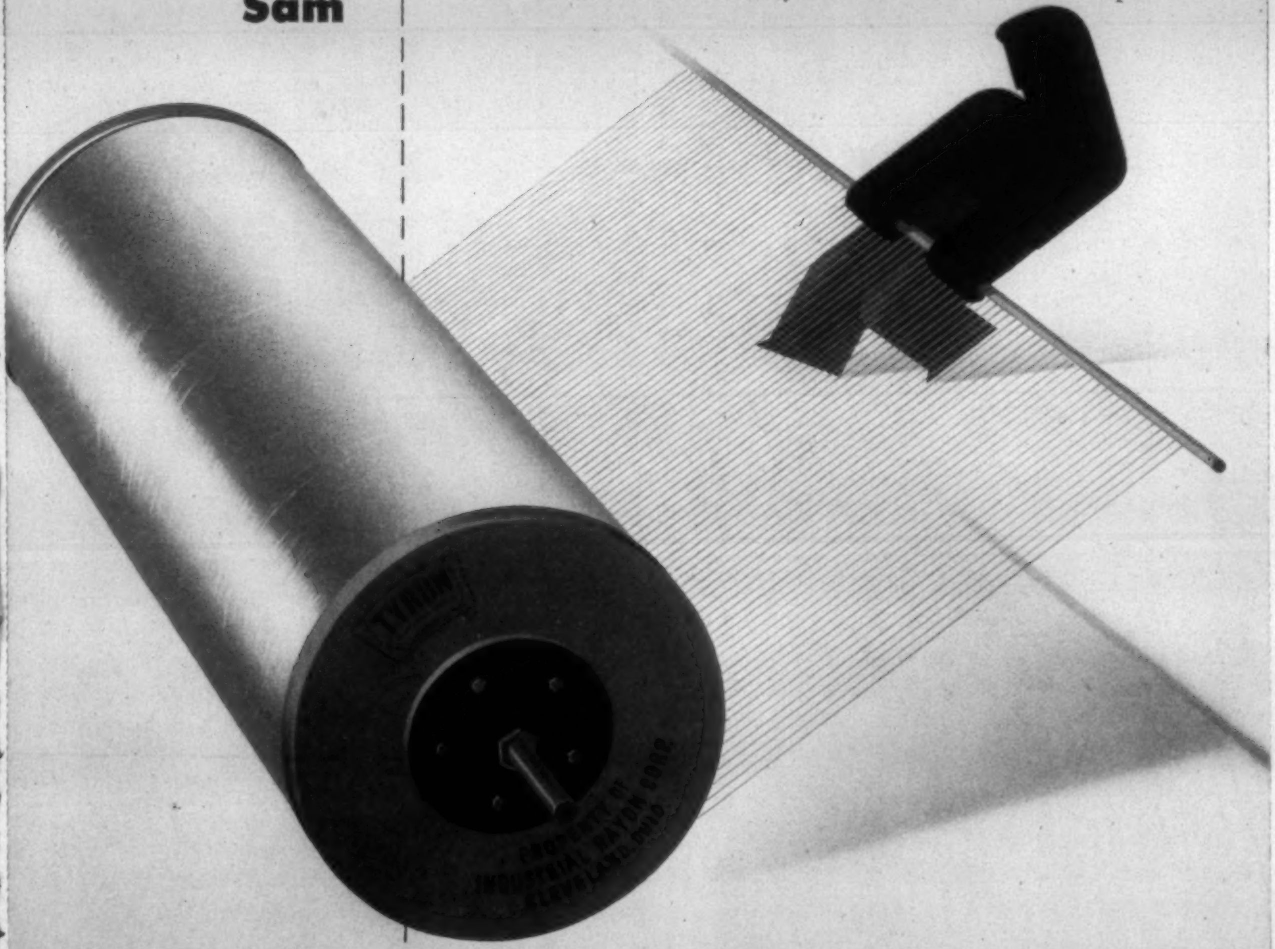

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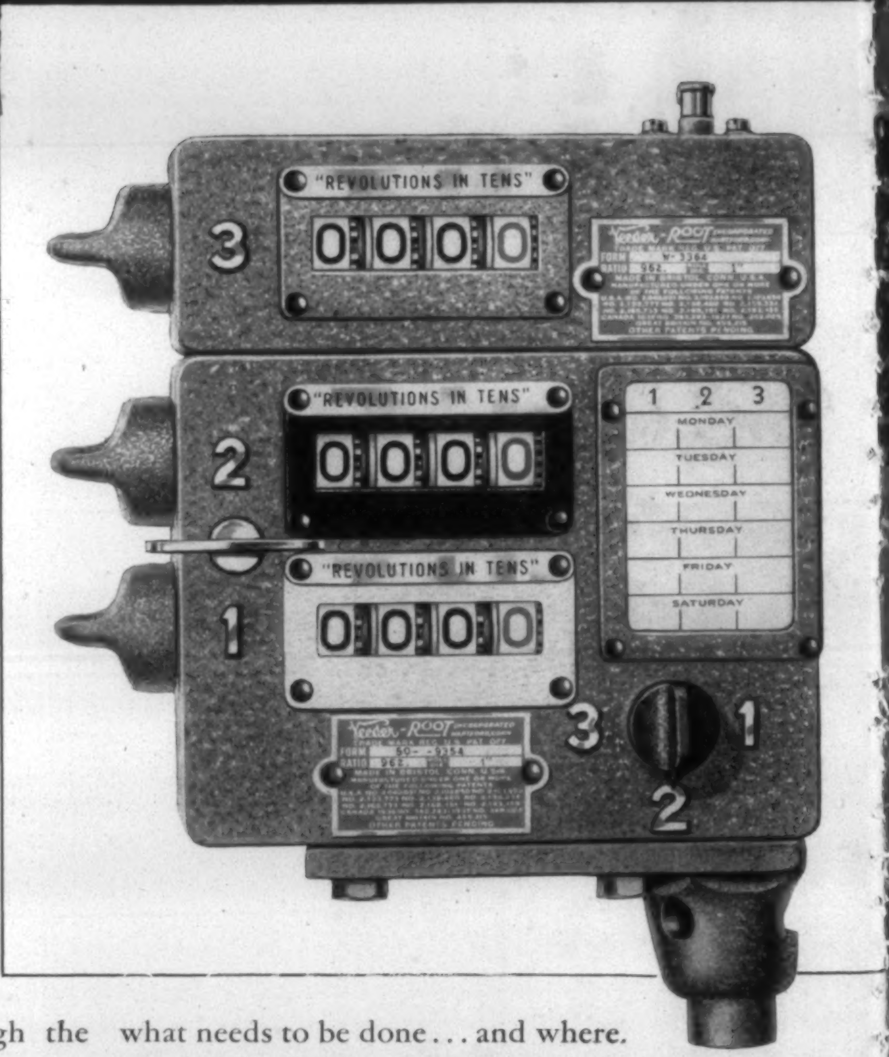

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